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AMERICAN
VETERINARY REVIEW.

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AMERICAN VETERINARY REVIEW.

DECEMBER, 1905.

Correspondents will please note the change in address of Dr. Roscoe R. Bell, from Seventh Avenue and Union Street, to 710 East Second Street, Borough of Brooklyn, New York City.

EDITORIAL.

EUROPEAN CHRONICLES.

PARIS, FRANCE, October 15, 1905.

VIIIth INTERNATIONAL VETERINARY CONGRESS. — Oh! now all my European mail is filled with reports of the meeting at Budapest; but when I consider that this chronicle will not reach the readers of the REVIEW before the month of December, I ask myself if it is worth while for me to repeat what I fancy many of our friends have already seen or read. Of course, the Congress was a grand success—it could not be otherwise. Veterinarians have always great reunions, and when are taken in consideration the fact that nearly 1,300 members had joined the Congress; that all countries of Europe, with America, and even Egypt, India, Africa, and Japan, were represented; that the government of Hungary and that of the City of Budapest had given their moral and financial help; that the committee, with Dr. Hutyra at its head, and the ever-energetic General Secretary, Prof. Dr. Etienne de Ratz, had worked for months and prepared the magnificent reception all the visitors enjoyed, could it be otherwise for the VIIIth International Veterinary Congress to be a success, and, according to what I have heard from some, surpassed those which preceded it? I am pretty well convinced that the United States delegation will sanction what I say. It was certainly respectable in number, and, I dare say, in quality. There were Dr. V. A. Moore, of Ithaca; Dr. W. H. Kelly, of Albany, both of whom I had the pleasure to see here; Dr. W. J. Lintz, of Philadelphia; Dr. Moses Jacob, of Knoxville, Ten-

nessee; Dr. H. E. Titus, of Lafayette, Indiana; Dr. Leonard Pearson, of Philadelphia; and Dr. A. Eichhorn, of Washington.

* * *

The number of papers which were presented at the Congress was very large and one can readily calculate about the amount of work done. There were no less than 58, of which 14 related to tuberculosis from various points of view, and among the authors I find the names of Dr. A. de Jong, of Leyden; Dr. Lorenz, of Darmstadt; Dr. Thomassen, of Utrecht; Dr. Bang, of Copenhagen; Dr. Rigner, of Stockholm; Dr. Hutyra, of Budapest, etc., etc. There were 5 on each of the subjects of meat and milk inspection, on diseases produced by animal parasites and protozoa, and 5 on the establishment of uniform principles relating to the reaction of tuberculin and of mallein. The subject of tropical diseases was the object of 3 papers by Dr. Theiler, Prof. Lignières and Piot-Pacha. Cancer of domestic animals was treated also in 3 papers. Then came rabies, swine epizoötics, foot-and-mouth disease, the subject of serotherapy, and molasses feeding, each one being treated by two different reporters, and finally 13 others treated various sanitary subjects.

The REVIEW has already published one of these papers, and I hope we will be enabled to do it with others later on.

* * *

Last month I gave a few of the motions voted at the closing seating; they related to the prophylaxy of tuberculosis. On this subject I must not neglect to point out at least one very interesting fact, for it is a victory of no small importance won against the advocates of the duality of the types of tuberculosis bacilli. It was at the seating of September 5th that the subject treated was "Relations Between the Tuberculosis of Man, Cattle, Fowls and Other Domestic Animals (especially of dogs)." The final vote was as follows: "(1) *Bacilli of bovine tuberculosis can infect man. Bacilli are found in man, which can be dangerous for animals. A reciprocate infection is possible in some cases.* (2) *It is desirable to continue researches to find out the point to which aviary tuberculosis is a danger for man and*

mammalias. (3) AT ANY RATE, IT IS INDISPENSABLE TO CONTINUE IN TAKING PREVENTIVE MEASURES AGAINST THE DANGERS THAT MAN MAY RUN FROM BOVINE TUBERCULOSIS."

The subject of a uniform formula for the issue of periodical sanitary bulletins was once more treated and recommended by special vote.

In relation to rabies, the most severe regulations were recommended—obligatory declaration, long quarantine, registration and taxes on all dogs, muzzle carrying, death for street dogs or those that are not claimed from the pound.

* * *

By the above remarks one can get a little idea of the work done by those who were at Budapest. One word more, to glance at the closing seating and relate the two last motions. The president of honor then was my friend Dr. Lydtin, of Baden-Baden.

Dr. Schmalz, of Berlin, after making important remarks on the growth and importance of the past and future international congresses of veterinary medicine, moved that . . . "a permanent committee of congresses shall be appointed at this meeting, composed of two of the principal officers of the present congress, two of the members where the next meeting will take place and one from every country of the world. This committee shall organize the congress, its work, etc., etc. . . ."

Our American friends will be glad to see that among the names elected (Drs. Hutyra, de Ratz, Wirtz and De Jong, Lydtin, McFadyean, Binder, Degive, Arloing, Perroncito and others), that of Dr. Leonard Pearson, of Philadelphia, figures as representing the United States of America. Our friend is in good company.

The other motion will be the subject of another consideration later on, as I have already taken too much space for today.

* * *

The next congress will be held in 1909 in Holland. The place is not yet decided upon.

A NEW HYPODERMIC SYRINGE.—Hypodermic administration of drugs has not yet become as frequent in the practice of veterinary medicine as in human; still, many veterinarians have recourse to it, and for them the objections that the syringe of Pravaz sometimes offer, are no longer a secret. It is a valve too dry that does not work, a leakage that cannot be stopped, a sterilization imperfect, etc.

I have seen lately used in human medicine an instrument which is called an "auto-injector," which I hear will soon be admitted into veterinary practice. The auto-injector is always

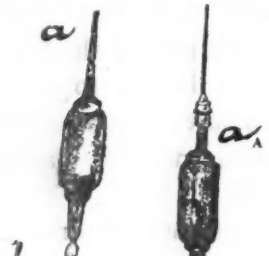
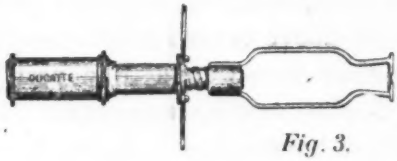


Fig. 1.

Fig. 2.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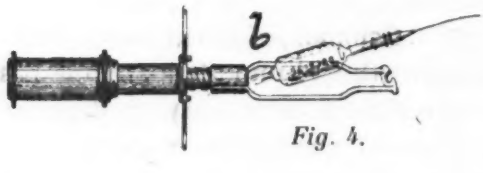


Fig. 4.

Fig. 5.

in working condition and permits thorough asepsy of the solutions which are injected; these solutions are prepared in proper doses and kept in glass ampoules, which are fixed in such a way at one end that all the trocars of a syringe of Pravaz can be adapted to it (*a*, figs. 1 and 2), while at the other it can be fixed on the auto-injector (*b*, figs. 1, 2 and 4). In fact, with this new instrument hypodermic medication is made so simple and quick, so sure and safe that all the objections that have existed against this mode of medication have subsided.

As to the auto-injector, it is only a minuscule pump, similar

to those which are used to fill up the pneu of a bicycle, upon which a peculiar support is attached (fig. 3). To now work with the instrument: the point *b* of the ampoule is adapted to the instrument (fig. 4) and made firm, the point *b* is broken off and the trocar of a Pravaz syringe placed on it and the instrument is then ready for work (fig. 5). The trocar passed to the alcoholic lamp is sterilized; it can be introduced through the skin and by the play of the piston of the syringe the solution is pushed out as in fig. 6. It is certain that by this method the liquid passing directly from the sterilized ampoule into the organism, there is perfect asepsy and all accidents and complications guarded against.

* * *

My Desk Full of Documents for Review and Consideration.—On returning to Paris after my vacation, I cannot tell the amount of documents that I found waiting for review and bibliographical notices. Letters were in large number, announcements of colleges, catalogues, books, etc.—the gathering was complete. I have set to work and answered all my letters; the announcements of the colleges I looked over and compared with those of last year, without finding much change or improvement, if any, and I concluded that all the efforts that were about being made to improve veterinary education had not matured yet. Of the catalogues, I noticed the one of Jenkins, the veterinary book publisher; it is certainly worthy of examination, and it shows the progress that veterinary literature has made in America since a few years. Among the journals I found the *Agricultural Journal of the Cape of Good Hope*, and the *Archives des Sciences biologiques*, published at St. Petersburg, Russia. Finally, among the books I found Dr. Bell's "Call-Book," Ostertag's "Meat Inspection" and Wyman's "Catechism of Veterinary Surgery."

Of the former it is useless for me to speak; the fact that for years it has been in use by practitioners, is sufficient evidence of its value.

Of the second, Ostertag's "Meat Inspection," the excellent

review made of it in the September number of Volume XXVIII, will displace me from its consideration. The value of the work has already been appreciated in previous pages. Of the third, Wyman's "Catechism of Veterinary Surgery," I have not seen any allusion appearing as yet in the REVIEW, and I may be allowed to refer to it.

* * *

In the preface Dr. Wyman says: "As a former teacher of veterinary students, I am fairly conversant with their needs. It has been my most earnest desire and effort to supply a work which, while scientific and modern, is free from matters of doubtful interest to the American student." Has the author kept his word? It seems to me that the answer must be affirmative. "Catechism of Veterinary Surgery" is certainly a student-book, and one that every American and English reading veterinary scholar will do well to have in his library. The mode of teaching resorted to by the author is not new, although in veterinary literature it has been used but little. Prof. Hanson had recourse to it in his book on theory and practice. No doubt the questioning does familiarize the student and bring to his mind at once the answers he must give, and the problem is not without difficulty for the author, as if the answers are easy for him the questions to put demand a great deal of attention.

Prof. Wyman has well filled the two parts. The questions are covering all the points necessary. All the answers are brought to the most scientific and modern standard of medical knowledge. Both are written without pretentious phraseology and the style such that it renders the reading easy. Only some 300 pages form this little volume, and yet what does it not contain that a student of surgical pathology needs? Truly, plates are absent. There are no illustrations, but certainly there was no use for them. It is not a work on operative but one on general surgery, and as such I am sure it fills well the need that students may have felt, and no doubt it will meet with the success it deserves.

I also had in my mass of American news a pamphlet, reprint from the annual report of the N. Y. Zoölogical Society, headed "Osteomalacia of Primates in Captivity," a clinical and pathological study of "cage paralysis," by Dr. Harlow Brooks and Dr. W. Reid Blair, the latter of whom kindly sent it to me with his compliments. I address him here my double thanks, for the compliment he has paid me and for the pleasure he has given me in reading this little essay. The authors described a form of disease which every one that has had much to do with animals in captivity have no doubt observed, and I, as one of them, remember observing it in menageries, specially that of Central Park, in New York, when in its infancy. The disease is well described and the illustrations very good, which are reproduced from a valuable addition to the scanty literature on the subject. It may not be the first, but it is opening the right door for further investigations. It is very interesting. A. L.

THE BUREAU OF ANIMAL INDUSTRY.

Stock papers continue to publish editorial articles and letters from correspondents upon the subject of the qualifications which should be possessed by the Chief of the Bureau of Animal Industry. For reasons best known to the writers of these screeds, they persist in painting the veterinarian as an individual possessed of no other intelligence than that which is necessary to enable him to practice his profession or look through a microscope; that he could expand his mind in a career devoted to the study of animal diseases, animal husbandry, agriculture and allied subjects, to even broader fields, is preposterous in their view; yet, according to these writers, a "stockman" has in his grasp a superabundance of knowledge upon every phase of the Bureau's work. The contention from the veterinarian's standpoint is that a veterinarian, simply for the reason that he is a veterinarian, is not necessarily qualified for the expansive position under consideration; but we assert with confidence begotten of conviction that we have men within our ranks as cap-

able, and more capable, of directing the affairs of the Bureau than can be found in any other class of men in this country, for, possessing practical and theoretical knowledge of the dangers from the scourges liable to be brought to our shores, as well as the conservation of our commercial relations in other lands by a strict scrutiny of animal products intended for shipment abroad, he can more intelligently direct all departments of his Bureau in harmony with these paramount considerations. On the other hand, the "stockman," having more in mind the commercial aspect, is likely to subjugate safety in expansion of trade to reckless haste in yielding to the demands of those private interests which would require but a short time to undo all that has been accomplished in the twenty odd years that the Bureau has battled to build up a foreign confidence in the vast products of our animal industry.

A correspondent of the *Breeder's Gazette*, signing himself "Robert Gibbons," writing from Wayne County, Mich., has a long letter in its issue of Nov. 22, and takes for his text the editorial in this journal for November. He republishes the major portion of our article, leaving out those portions which were not suited to his purposes, and criticizing our views from the standpoint of the stock-raiser. The portion which he omits to reproduce is a sufficient reply to any argument which he puts forth; yet he maliciously emasculates our whole contention by making extracts only wherever it suits his weak position.

The larger part of the duties of the directing head of the Bureau as enumerated by Mr. Gibbons are, we submit, such as to require technical veterinary knowledge. He says: "*It has to do not only with the diseases of live stock, but with the industry in relation to the welfare of the country at large. It inspects the live stock before slaughter, takes the lead in combatting the spread of diseases from one State to another, and makes regulations for stamping them out. It regulates the shipping of live stock, and looks after the lines of transportation and takes action necessary to insure proper sanitary conditions. It looks after foreign markets and prevents the importation of diseased ani-*

mals from abroad. It is always ready to give information regarding the live-stock industry in other lands and the characteristics of foreign breeds. The stock-raiser, the packer, the dairyman, the importer and the exporter, expect the Bureau to look after their interests and furnish them with desired information."

After enumerating all these scientific duties, to perform which only a man possessing a technical and true knowledge of the varied subjects can hope to intelligently succeed, Mr. Gibbons has the effrontery to conclude: "*Under such demands the only safe man for its chief is one thoroughly informed regarding all phases of the industry it is charged with caring for.*" His evidence is stronger than our own argument that a veterinarian is the *only* man who can properly fill the position, for to be "thoroughly informed regarding all phases of the industry" one must have received thorough instruction regarding the diseases of animals in his basic education, and in securing this knowledge he would naturally receive recognition from his instructors in the form of a diploma. Upon that foundation, then, he could go on and build so as to be "thoroughly informed regarding all phases of the industry." But without it he cannot build.

In the garbled extracts made by Mr. Gibbons from the REVIEW we held to this view, which the following paragraph shows, omitted by him presumably for the reason that it did not serve his biased deductions:

"One of the greatest weapons in the hands of the profession to-day is the opportunity to assure the country that the demand of the stockmen for a broad-gauged man of affairs at the head of the Bureau can be met without changing the law; that there are men within *our* ranks who are as capable of administering its affairs in all its ramifications as there are without, with the additional accomplishment of possessing a thorough understanding of the dangers to be safeguarded by the importation of animal scourges from other lands as well as the control and suppression of those diseases which decimate our herds and flocks at home."

No better argument to refuse to change the law could possibly be put forth than Mr. Gibbons has furnished in his conception of the duties of the position, and we strongly urge our *confrères* to quote him freely in their campaign of education before their Congressmen.

WHAT THE PROFESSION HAS ACCOMPLISHED IN JOURNALISM.

The REVIEW has ever insisted that efforts to produce results in professional journalism can only be successful when the members of that profession enter with proper spirit into the making of that success. It is the aggregate of their contributions—whether it be an abstract theory, the record of a demonstrated truth in the field of bacteriology or preventive medicine, a report of an interesting or unusual case, or even a matter of professional news; whether it be the story of a movement to secure wise and needed legislation, or the crystallization of an effort to raise the standard of education; whether it be the scrutiny of the literature of other tongues translated and summarized to increase the total of our knowledge, or the plain statement of the transactions of medical association meetings—whatever be the character of the contribution, it all goes to consume our interest, to increase our knowledge, to ennoble our ambitions, to broaden our characters, to render our interest in our work more intelligent and more tenacious, and in every way to make of us better and more earnest and more scientific veterinarians.

The great family of REVIEW readers have yearly fallen in more deeply with this idea, and if we are to take the evidence of our esteemed contemporary from the Pacific Coast as expressive of the general appreciation of the profession as to how well they have accomplished this, they may well feel satisfied with their work. But the editors of this journal, while sincerely appreciative of the generous words of the *Western Veterinarian*, desire to have it well understood that what has been accomplished is no measure of what is in store for its readers, for its motto

has ever been, "A Journal of Veterinary Progress," and the REVIEW is in better position to realize this than it has ever been.

We republish the following editorial from the *Western Veterinarian* for November with pride:

"THE AMERICAN VETERINARY REVIEW.

"The above is the title of undoubtedly the best veterinary journal printed in the English language to-day, and while we are not familiar with the many journals published on the European continent, we believe that the REVIEW ranks with the best. What veterinary publication can present, as the REVIEW has done in its September issue, one hundred and thirty-four pages of printed matter, every word of which is practical and of vital importance to the veterinary profession? All of this valuable reading matter is procurable for the exceedingly small sum of twenty-five cents. How any veterinarian, be he engaged in active practice, research work, or filling some Federal, State, County or Municipal position, can manage to get along and keep up with the rapid progress of modern times without being a regular subscriber to the AMERICAN VETERINARY REVIEW is something that we think can hardly be explained. As far as we are concerned, we have been a regular subscriber since our student days, and from that period up to the present time there has been nothing to which we looked forward to with more pleasure and anticipation than the regular monthly visit of the REVIEW.

"As each year rolls by we get our volume bound and place it in our library with a feeling of pride that we have added to our collection a complete work of such value that if lost it could never be replaced.

"In our daily practice we frequently come across obscure cases that necessitate the consultation of our text books, and where text books fail to provide us with the required information, as they usually do, we resort to the bound copies of our REVIEW with the result that it is rare

indeed when we fail to find the chronicled experience of other practitioners in regard to similar cases. For this and many other reasons we consider the bound volumes of the AMERICAN VETERINARY REVIEW to be the most valuable of our literary collection."

AN EXPLANATION AND A MORAL.

The late arrival of the November REVIEW upon the desks of its subscribers was occasioned by the breaking of some of the fundamental machinery in the press-room a few hours before the last form was run off, necessitating a delay of five or six days during which the requisite repairs were made before completion of the printing. Meantime every effort was made to enlist neighboring press-rooms in our behalf, but all were running at their full capacities, and no course was open except to "grin and bear it." When the REVIEW finally was delivered to the New York Post-office, and before it reached its subscribers, anxious letters began arriving from all quarters inquiring the cause of the unusual delay. To all such inquirers, the above explanation is offered, with assurances that there is little likelihood of a repetition of the misfortune.

Meanwhile, the circumstance serves to show how necessary the monthly visits of the REVIEW are to veterinarians who read it, and consequently how much is lost by those who do not read it.

AT the recent meeting of the Iowa-Nebraska Veterinary Medical Association, at Omaha, Neb., the members presented Secretary A. T. Peters with a beautiful loving cup in grateful recognition of his long, faithful, and valuable services to the organization. His effort to relinquish the Secretary's portfolio in favor of new blood did not meet with success, the membership believing him to be an ideal Secretary, and one who had done a great deal toward making the Association the success which it undoubtedly is. His full report of the deliberations of the late meeting will be found elsewhere; also two of the papers read.

ORIGINAL ARTICLES.

THE NEGRI BODIES AND THE DIAGNOSIS OF RABIES.

By Cassius Way,

New York State Veterinary College, Ithaca, N. Y.

Presented to the Fifteenth Annual Meeting of the New York State Veterinary Medical Society, Sept. 14, 1905.

At a meeting of this Society held at Brooklyn in September of last year we had the pleasure of discussing the Van Gehuchten and Nelis method of diagnosing rabies.* It is obvious to those who have to deal with this disease that a quick means of diagnosis is of great importance. In making a diagnosis by means of the inoculation of experimental animals, which is often impossible owing to the decomposition of the material to be used, the time consumed is sufficient for the person or animal which chanced to have been bitten by the supposed rabid dog to develop the disease and succumb to its ravages. This fact has stimulated a great deal of thorough research on this subject.

Since Pasteur introduced and perfected the diagnosis of rabies by means of animal inoculation, Babes, Van Gehuchten and Nelis, and Negri have each produced a method for the rapid diagnosis of this disease. It is necessary that a desirable method should fulfill the following requirements: 1. It should demonstrate the lesions characteristic of the disease at the earliest time at which they appear. 2. The technique of the method should not be so complicated and difficult as to render the accomplishment impossible under the practical conditions which are met with. 3. It should demonstrate lesions even after they have been moderately affected by post-mortem changes.

Babes described certain changes consisting of a proliferation of small round cells about and within the capsules of the nerve cells. In addition to this he found what he accepts as constant and positive lesions in the medulla oblongata consisting of a

* Moore, V. A. and Way, C. "A Rapid Method for the Diagnosis of Rabies." Am. Vet. Review, Oct., 1904.

collection of round embryonic cells about the central canal and especially about the large modified cells of the motor centres of the bulb and cord for which he proposed the name "rabic tubercle." This method does not seem to have been very popular, as it is said the lesions are not constant in rabies and may occur in other conditions.

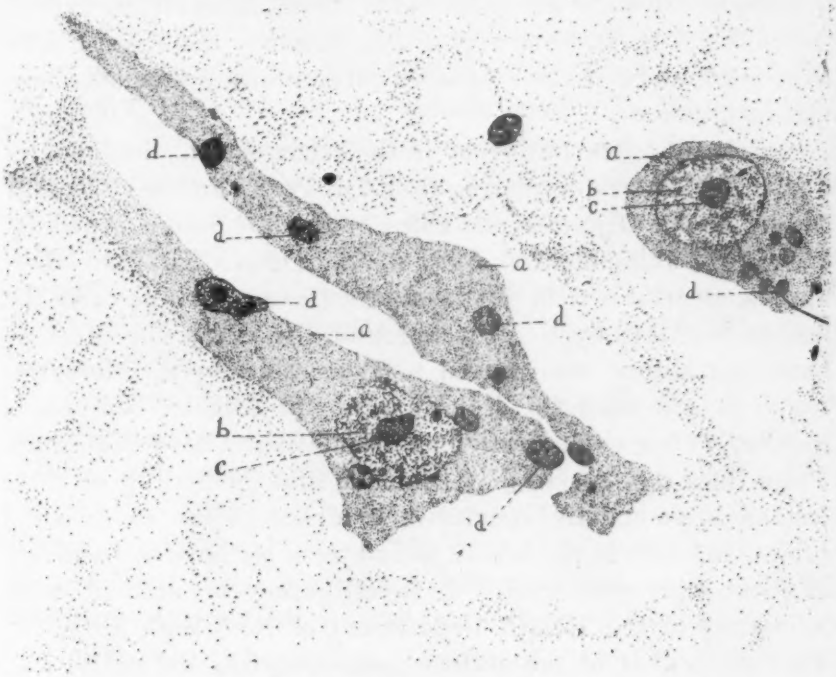
Later Van Gehuchten and Nelis discovered in the spinal and plexiform ganglia of rabid patients certain lesions which they considered as characteristic and diagnostic of this disease. These lesions consisted in the atrophy, the invasion and destruction of the ganglion cell as a result of new formed cells evidently from the endothelial capsule. With us this method proved to be very satisfactory providing the disease was allowed to run its full course. However, when the animal was killed before the termination of the disease the lesions might be present or absent, depending on the length of time the disease had continued. With this method it is necessary that the disease shall run its natural course, thus precluding an early diagnosis.

In 1903, Negri, of the University of Pavia, made some important observations on the pathology of rabies. He described small bodies or cell inclusions, since called Negri bodies, which he found in the Purkingie cells of the cerebellum and in the large ganglion cells of the Ammons horn. Negri believes these bodies to be the etiological factor of the disease and classifies them among the protozoa. In his original paper he states the following: the bodies are specific microörganisms which are characteristic of the disease, found only in animals affected with rabies; they appear comparatively early in the disease, he having found them on the seventh day. However, they appear in larger numbers and are of greater size as the disease progresses and are most numerous and largest at the time of the natural death caused by the disease; no special technique is necessary to demonstrate these bodies; their constant appearance in cases of rabies forms a basis for a positive opinion and diagnosis and they are affected very little by decomposition of the surrounding nervous tissue.

While his findings did not attract much attention at first, a number of workers have studied and reported on those bodies and the method has been employed in a number of laboratories in diagnosing rabies.

The present status of the knowledge concerning the etiology of rabies together with the constant demand for quicker and better means for diagnosing the disease has led me to bring before this Society the results of the work we have done during the past year on this new method of diagnosis. Our purpose has been to verify Negri's findings concerning the morbid changes which he described in the nerve cells of the brain and which he considers to be characteristic of this disease.

During the past year we have demonstrated satisfactorily the Negri bodies and during the past six months have used this method in making diagnoses, and in many cases we have veri-



NEGRI BODIES IN NERVE CELLS.
a. Cell body. b. Nucleus.
c. Nucleolus. d. Negri Bodies.

fied the diagnosis based on the microscopic examination by animal inoculations.

These bodies or cell inclusions vary in shape. The most common forms are round or oval, the round ones being from .5 to 23μ in diameter, while the oblong ones vary from .5 x 1.5μ to 5 x 27μ; irregular forms are occasionally seen, however; the round or oval ones are by far the most common. In preparations stained with eosin and methylene blue they appear as bright red bodies containing one or two nuclear like structures which are surrounded by a number of other small, circular, regular bodies. They are said to preserve their form even when the brain tissue has undergone marked degeneration, after prolonged immersion in glycerine and after several days' drying. Personally we have not made a study of rabid brains under such conditions, with the exception of one case, where the brain had decomposed to such an extent that it was structureless and of the consistency of watery pus. In this case the Negri bodies were not found and the extensive decomposition precluded animal inoculation.

In regard to the frequency in the occurrence of these bodies I take the liberty of quoting from Dr. Poor's article, "Recent Studies in the Diagnosis of Rabies" (*Medical Record*, April 15, 1905): "Taking the combined statistics of six European laboratories, we have a total of 550 observations. In 344 cases the lesions described by Negri were found. In every one of these cases the animal was proved to have rabies by the biological test. In 206 cases the lesions were not found. Out of this number, 11 cases were proved by inoculation to have had rabies. From these figures one may conclude that the finding of these lesions is practically conclusive evidence of the existence of rabies, and that in the failure to find them we have a possibility of about 5 per cent. error." In investigating this method in the laboratory of the Health Department of New York City, Dr. Poor states that of the sixteen cases occurring naturally, *i. e.*, from the bites of animals proved to be rabid, 13 were dogs, 3 were horses, and one was a human case. All of these showed

the Negri bodies, the diagnosis being made by microscopical examination. In reference to these bodies being characteristic of rabies only, Poor makes the following statement concerning the control cases, *i. e.*, animals affected with other diseases which he has examined: "In none of these cases was anything resembling Negri's corpuscles found, except in one of the cases of experimental tetanus. In this case there were a few minute eosinophile bodies occurring as inclusions in the Purkingie cells of the cerebellum. They showed no internal structure and did not look exactly like even the structureless bodies found in rabies, and it is my feeling that one familiar with these inclusions would not mistake them in making a diagnosis. * * * So far as I know, the study of these bodies has not progressed sufficiently far to throw light on this subject."

The technique of this method is comparatively simple. In our work we have found the Hippocampus major or the Ammons horn the best and most convenient source of material. The tissue may be fixed in Zenker's fluid, carried through and sectioned, preferably by the paraffin method. When the sections are stained with eosin and methylene blue (Sat. Alc. Soln. of eosin 10–15 minutes, Loeffler's alkaline methylene blue 3–5 minutes) the bodies stand out as bright red inclusions within the blue nerve cell. In our work we have found that by using Zenker's fluid as a fixing agent the best results may be obtained. With this method of fixation and staining a diagnosis may be made in from 18 to 24 hours.

While in this preliminary paper we simply wish to present our findings in regard to the morbid anatomy of rabies, we are constrained to make a few suggestions concerning the handling of rabid material. From what has been said, it is evident that this method can only be used by those familiar with laboratory technique and who have the facilities for such work. In this respect it differs from animal inoculation, which can be made by any practitioner. The importance, however, of knowing that a dog that has bitten animals or people has rabies, is sufficient to overcome the objections to the method and to warrant

the extra trouble of sending the material to some laboratory.

In our experience, we have found that the simplest and safest method of sending suspected material to the laboratory is to cut off the head and neck close to the shoulders, pack it in a pail of ice and ship by the first express.

In conclusion, I would state that we have in this method a means of diagnosing rabies which appears to be the best of any yet suggested, for it approximates more closely than any other the following necessary requirements, namely: It enables one to detect the lesions (1) which seem to be quite constant and characteristic, (2) which appear comparatively early in the course of the disease, (3) which may be determined by a practical method of technique, (4) which appear to be constant and definite enough to make an opinion concerning diagnosis possible, and (5) lesions that are little affected by moderate post-mortem changes.

While it is obvious that further work should be done on diseases of the nervous system, especially tetanus, in order to determine whether or not these bodies are constant, it seems fair to conclude from the present status of experiments and knowledge that this method is affording a long desired means for making a rapid diagnosis comparatively early in the course of the disease.

Up to October 1, 17,479 more horses had been sold in the Chicago market than during the same period in 1904.

Dr. James A. Waugh, of Pittsburgh, Pa., recently found a nine-pound calculus in the colon of a horse that died of intestinal obstruction.

Cattle Feeding Experiment.—The Nebraska Experiment Station has just issued Bulletin No. 90, giving a report of a cattle feeding experiment in which several forms of roughness common in the West were compared. This is a 22-page bulletin, illustrated, which sets forth very clearly some pertinent facts relative to the economical production of beef—facts which should be of interest to every cattle feeder. The bulletin may be obtained free of cost by residents of the State upon writing to the Agricultural Experiment Station, Lincoln, Neb., for Bulletin No. 90.

PROLAPSE OF THE RECTUM.

By S. H. Bauman, V. S., Birmingham, Iowa.

Read before the Annual Meeting of the Iowa State V. M. Association.

Prolapse of the rectum is rather uncommon in the horse, but is quite common in the pig and occasionally met with in the dog. We may have eversion of the anus, or it may be eversion of the rectum. In eversion of the anus it would be simply an inflamed œdematous condition of the mucous membrane, or it may be caused by hæmorrhoids which protrude through the anus. If there is not sufficient space for the mucous membrane in the anal canal, it naturally pushes outward. In other cases prolapse is due to the loosening of the innermost lining of the rectum from its deeper muscles. It is naturally held in place by the sub-mucosa, and if this is unduly stretched by inflammation or the passage of hard fæces, the motility of the anal mucous membranes is abnormally increased, so that it is forced out of the anus with every increase of abdominal pressure. If the power of the sphincter muscle is also weakened, the tendency to prolapse is increased.

If the rectum, not merely its mucous membrane, but whole rectum is loosened from its attachments to the levator muscle, so that it protrudes through the sphincter, the condition is known as prolapsus recti. At this point I wish to explain the disposition of the peritoneum in the posterior portion of the abdominal cavity in the relation to the rectum. As it passes in the pelvis the membrane gradually leaves the rectum within about five inches of the anus, first leaving its superior surface, then sides and then in the inferior surface to become reflected in the male on to the superior wall of the bladder, forming the recto-vesical pouch and in the female on to the superior wall of the vagina, forming Douglas's pouch. The recto-vesical pouch of peritoneum extends back to within about three inches of the anus, while the Douglas's pouch in the female extends back some further, so that if prolapse is present in an extreme degree a loop of the intestines may pass in this perito-

neal pouch and out through the anus, causing a rectal hernia.

This condition in the horse and dog is quite serious and needs prompt attention. The protruded parts soon become darkened and gangrenous, and will cause death from septic infection if not properly and promptly treated.

In pigs prolapse of the anus is not as serious as of the rectum. It is not uncommon to find them at the packing houses, and usually called piles by the inspectors, and, I think, are passed by them as fit for food.

Etiology.—The conditions which bring about prolapse are commonest in the young animal. Long standing diarrhœa may influence the mucous membrane and swell the sub-mucous and perirectal connective tissues and relax the sphincter muscle. Even without such inflammatory process the connective tissue in the young animal is very soft, and its muscular system is less developed than in later life.

In the young animal, too, the curvature of the cæcum is less marked than in the adult. So that the closure of the pelvic cavity is almost a muscular one.

Another cause is constipation, which sets up inflammation of the mucous membrane and causes straining. I have seen pigs that were fed exclusively on butter milk at a creamery which were affected with prolapsus recti, when there would be from four to eight inches of the rectum protruding. Internal hæmorrhoids and rectal polypus may also lead to invagination.

Treatment.—The treatment in prolapse of the anus and rectum should be somewhat different with the horse than with the smaller animals, as the horse is more susceptible to peritonitis than the pig and dog. The chief trouble to deal with is the straining, which often takes place after the rectum is replaced and causes a return of the prolapse, which is to be guarded against by keeping the animal as quiet as possible, resort being had to the medicinal use of morphia, given hypodermically or in the form of suppository, if necessary.

In the horse the prolapse, if of recent occurrence, should be reduced, if possible, by careful manipulation with the fingers.

Hot applications should be applied to the parts, when it can be easily reduced. But, if of some days standing, with more or less adhesions, it will be more difficult.

If, after having reduced the prolapse, you find it will recur, the method recommended by Mueller, called tobacco pouch suture, should be resorted to, which is as follows :—

Irrigate the rectum with warm water until you have it entirely free from fæces. A heavy, stout linen or cotton tape should be passed through the skin in and out completely around the exterior of the anus, the two ends being drawn together rather tightly, like the strings of a purse or a bag, using a loop knot. This method would require almost the entire attention of an attendant, in order to be at hand to untie the tape before defecation. The string would likely have to be kept in place from 24 to 36 hours. This method should, however, only be used after unsuccessful efforts have been made in keeping the bowel back in its normal position, as the suture of itself will cause more or less irritation and straining.

If the prolapse is large, hard and dark colored, including a considerable portion of the rectum, it should first be scarified with a sharp-pointed knife blade. The œdematous mucous membrane will be found to be very vascular and will bleed freely from the scarification, and with the aid of hot applications will be effectual in reducing the size quite considerably. Astringent lotions, such as zinc sulphate and plumbi acetate may also be used to bathe the parts with. The hot applications and astringent lotions should be used several times daily, and the prolapse will gradually grow smaller until it will revert of itself.

In the pig the prolapsed rectum is usually brought to our notice after the inversion has taken place from three to four weeks. Upon examination we find from four to six inches of a hard œdematous mass adhered together, which is of a dark red or black color, impossible to return and must be excised. The bowel should be resected and the cut ends united by suture. The pig should be placed upon its side or back and etherized. A word of caution about producing anæsthesia in the pig, lest you

might have the same experience I had with my first one, might not come amiss. In this instance the A C E mixture was used, the pig was placed upon its back, only a small quantity poured on a piece of gauze and inserted into a funnel-shaped leather cone, with about five-eighths (5/8) inch opening in the small end, was placed over the nose and mouth. About three inhalations of the mixture in this way was sufficient, for after removing the cone, the victim was dead. After this experience ether alone was used; even it must be used with caution; a considerable quantity of air must be admitted in the cone. I think the cone made of wire screen covered with gauze to admit the free inhalation of air would answer the purpose better than a leather cone, however, after your patient is thoroughly under the anæsthetic. The index finger of the left hand is passed into the lumen, the outer bowel is then cut across inferiorly very near the sphincter and the vessels ligated if necessary; this cut opens the peritoneal cavity. If any prolapse hernia then exists, it can be replaced and the peritoneal surfaces are stitched together with silk or catgut. The inferior wall of the inner bowel is then cut across, and its upper cut edges stitched to the cut edges of the lower bowel, the ends of the suture being used as tension threads, the inner and upper bowel walls being sutured as fast as the cuts are made. In this way retraction of the peritoneum and bloodvessels are avoided. The peritoneal cavity does not usually extend to the superior portion of the prolapse. It frequently happens that the circumference of the outer bowel is so much greater than that of the inner, that it is difficult to adjust the two accurately.

The after-treatment should consist in careful attention to the diet, which should be sparing and of a kind likely to influence the consistency of the fæces and keep them soft. This after-treatment should be followed out even where the prolapse has been replaced without excision.

THE SURGICAL CLINIC has recently been interjected into the meetings of the California State Association with great success, and the interest and attendance have redoubled.

RADIAL PARALYSIS IN THE HORSE.

By Earl Stewart, V. S., North Bend, Neb.

Read before the Iowa-Nebraska Veterinary Medical Association, Oct. 12, 1905.

In studying the lameness or pathological condition produced by paresis of the radial nerve, it is well to notice the nerve and the structures supplied by it. The radial is the largest of the brachial plexus; it derives its fibres from the seventh and eighth cervical and from the dorsal roots of the plexus, and is directed backwards and downwards, on the inner face of the subscapularis and teres major muscles, crossing their direction. In this portion of its course, it proceeds parallel to the humeral artery, from which it is separated by the ulnar nerve. Arriving at the deep humeral artery, which it leaves on the outside, it passes behind the humerus with the divisions of that artery, and enters between the caput magnum and brachialis anticus. After creeping along the posterior border of the latter muscle, it gains the anterior face of the ulno-radial articulation, where it is covered by the two principal extensors of the metacarpus and the phalanges, and meeting the radial artery it accompanies it on to the oblique extensor of the metacarpus. There it terminates by two branches, which enter the texture of that muscle. In its course it successively gives off: (1) Before leaving the internal face of the limb to pass beneath the mass of extensor muscles of the forearm, a very thick fasciculus, composed of several branches, descending and ascending; the latter bend round the terminal tendon common to the latissimus dorsi and teres major to become lost in the body of the great extensor. The others reach either the long and middle extensors or the inferior portion of the principal muscle, the large extensor. (2) Behind the arm, filaments to the caput medium and anconeus and several cutaneous ramuscules, disengaged from beneath the former muscle, that descend beneath the skin on the anterior face of that part. (3) In the antibrachial region branches to the extensor metacarpi magnus and flexor metacarpi externus and the two extensors of the digit.

Thus we see that the radial nerve is distributed to and therefore stimulates the whole mass of the extensor muscles of the forearm and foot, besides a flexor of the latter, and that it endows the integument of the anterior antibrachial region with sensibility. On account of its position and course and relations, the radial nerve is exposed to compression and mechanical violence. It is therefore much more frequently the seat of injury than the other nerves of the fore limb. Bilateral radial paralysis of central origin is said to have occurred, but almost all the veterinarian is called on to treat is peripheral unilateral paralysis. This condition was first described in 1850 by Goubaux and since that date a large number of cases have been recorded.

Etiology is complex, but mechanical injury is by far the most common cause of this paralysis. Bruises about the shoulder or arm from kicks, blows from the carriage pole, collisions against the jambs of doors, slips and falls, pressure from tumors, may all produce it. Prolonged compression resulting from the animal lying in an awkward or enforced position is, however, much the most frequent cause. Radial paralysis is often a sequence of casting. When the horse has been kept down for a long time with its legs crossed, or in the ordinary position, and especially when under such circumstances it has struggled violently, as a rule though not always, the lower limb is the one affected. So, when necessary to cast a horse it is advisable to select a good soft place and not keep the horse down any longer than is necessary. Several cases of radial paralysis occurring during work or in the stable and quite apart from mechanical injury, have been recorded by Dollar-Möller, Goubaux, Cadiot, and other authors. The radial nerve may become paralyzed in consequence of excessive contraction of the muscles which it supplies, but in cases of this kind either the nerve itself is injured or the paralysis is due to inflammation of the muscle or polymyositis consequent on excessive work. Radial paralysis is described under rheumatic paralysis and that of infection or toxic origin, but these are very rare. The co-existence of radial paralysis and fracture of the first rib has been demon-

strated by many post-mortems; but Cadiot says that in most cases post-mortem examination of animals suffering from the disease fails to demonstrate the existence of fracture of the rib. The reverse is true, however, viz., that fracture of the upper part of the first rib is usually accompanied by radial paralysis, a result due to the proximity of the radial nerve to point of fracture.

Radial paralysis may be divided into three classes: Complete, incomplete, and partial paralysis. In complete paralysis the joints of the affected limb, with the exception of the shoulder, are usually flexed when the horse is resting. In consequence of loss of power in the triceps and anterior brachial muscles, the arm by the contraction of the coraco-radialis, while the metacarpus and phalanges are flexed by the action of the posterior antibrachial muscles. The knee is carried in advance, level with or in front of a vertical line dropped from the point of the shoulder. The hoof is usually rested on the toe, but when advanced beyond the vertical line just mentioned it may be placed flat on the ground, the joints then being less markedly flexed. When the limb as a whole is flexed it may be brought into a normal position by thrusting back the knee with sufficient force to counteract the action of the flexor muscles. In walking the shoulder and arm are more or less carried, the lame limb being moved as a whole, but as the lower portions of the limb are insufficiently extended, the stride is much shortened. The least attempt at placing weight on the leg causes all the joints to become flexed and the shoulder and arm to suddenly drop; the animal feeling itself falling, instantly transfers its weight to the opposite limb. At a more rapid pace the animal goes on three legs, as though suffering from an exceedingly painful condition.

Incomplete paralysis may either constitute a stage in recovery from complete paralysis or be an independent condition. At rest the limb is held as in the preceding form, but the entire plantar surface of the hoof more frequently comes in contact with the ground. In moving lameness is less marked, and in-

stead of occurring at every step may only appear at intervals, varying in length with the degree of paralysis, rapidity of movement and smooth or rough character of the ground. The limb is slowly advanced, the stride shortened, and the hoof carried or dragged along the ground. The animal stumbles over the smallest obstacle, the limb immediately becoming flexed.

In partial paralysis most of the muscles supplied by the radial retain their function and disturbance is much less marked. As a rule, the position of the limb at rest is normal; during movement it is freely extended, the stride is of ordinary length, and the joints do not collapse when weight is placed on the limb, slight lameness is visible at a trot, the shoulder and arm being more or less markedly carried forward without, however, rolling outwards as in paralysis of the suprascapular nerve.

Pathogenosis.—Even in cases of complete paralysis, cutaneous sensibility is usually normal or only slightly diminished, a fact attributed to the less susceptibility to injury of the sensory as compared with the motor fibres. This is probably an error, however, the persistence of sensation being due to a collateral innervation, any deficiency being supplied by neighboring nerves. Sometimes sensibility to pain is markedly diminished and cases are not infrequently seen in which the anterior and external surfaces of the forearm are insensible. Like loss of sensation, vasomotor disturbance is rare, though abundant perspiration, corresponding in area to that of the paralyzed muscles, has been described. Localized swelling is almost always due to violence, followed by hæmorrhage and sanguineous infiltration of the subcutaneous and muscular tissue, though it may also follow muscular rupture, hæmoglobinuria, or local strain.

The condition recognized as "radial paralysis" is not invariably of nervous origin; sometimes it follows muscular injuries. At the post-mortem of certain horses which had been over-driven and showed symptoms of complete radial paralysis, Fröhner found the radial nerve intact, while the muscles it supplies were swollen, infiltrated and yellowish; their fibres had lost the normal striation and had undergone granular degenera-

tion. In this form the paralytic symptoms are accompanied by those of acute inflammation of muscle.

Diagnosis presents no difficulty, except in partial paralysis. It should be remembered that in most attacks of this kind, when the horse is trotted, the point of the shoulder is jerked forward each time the limb comes to the ground, while lameness is marked. You will, therefore, not confuse this peculiar jerking movement of the point of the shoulder with the deviation outwards—a symptom peculiar to paralysis of the suprascapular nerve, before the postea spinatus muscle becomes atrophied. The symptoms of complete radial paralysis are at first sight somewhat alarming and explain the view so often taken by owners, dealers and empirics, that the arm or one of the phalanges is fractured. Under two conditions this paralysis is very grave: (1) When it is bilateral, because the horse is obliged to remain lying for a long time, and (2) when an animal in consequence of some severe operation on the right fore foot has been forced to remain lying for a long time on the left side (or *vice versa*), and paralysis occurs from continued pressure. If under such circumstances the horse cannot stand on the diseased foot, it is evidently in great danger.

The course taken by radial paralysis depends on its cause as well as on the gravity of the injury to the nerve and neighboring tissues, but as it is impossible to detect the actual lesions, nothing precise can be said under this head. Sometimes the symptoms diminish within a few days, and the animal rapidly recovers; but more frequently they persist unchanged for several weeks; improvement then occurs and usually makes good progress. The paralysis generally persists for a month to six weeks.

Prognosis is generally favorable. Out of 68 cases recorded by Cadiot only two proved incurable, so the common termination of unilateral radial paralysis is recovery; but in obstinate cases the atrophy of the muscles which occurs at a certain stage renders the prognosis somewhat graver.

Treatment.—Exercise favors recovery, but it is important

not to return the animal to heavy work too soon. Relapses have often been seen and are almost always troublesome. Electricity and massage and the application of powerful douches are recommended and are no doubt beneficial. Borman recommends the subcutaneous injection of 3 to 6 grains of strychnine nitrate. My treatment is blistering repeatedly the affected limb and turning the horse out where he can exercise and give him ℥ ii doses of iodide of potassium, alternated with ℥ ii doses of nux vomica.

WHAT BECOMES OF THE GRADUATES.—A graduate of the New York State Veterinary College has gathered the following data regarding the fate of the class of 1905: F. W. Andrews is practicing at Mt. Kisco, N. Y. . . . P. J. Axtell is practicing at Deposit, N. Y. . . . N. D. Backus is practicing at Geneva, N. Y. . . . F. J. Baker is practicing at Brasher Falls, N. Y. . . . A. A. Brockett is practicing at Little Falls, N. Y. . . . R. M. Buffington is a Government inspector at Kansas City, Mo. . . . A. J. Burley is practicing at Herkimer, N. Y. . . . A. K. Dean is a Government inspector in Chicago, Ill. . . . W. W. Dimock is preparing to practice in Hartford, Conn. . . . A. English—Assistant in Anatomy in the N. Y. S. V. C. . . . R. W. Gannett is practicing in Newark, N. Y. . . . M. Hamilton is practicing in Delhi, N. Y. . . . H. L. Lawrence has a Government inspector's appointment for Kansas City, Mo., to take effect Jan. 17, 1906. . . . C. Linch is assistant for Wm. H. Kelly in Albany, N. Y. . . . F. H. McNair, assistant in physiology and materia medica in N. Y. S. V. C. . . . A. L. Mason is practicing in Syracuse, N. Y. . . . W. M. Pendergast is practicing with his brother, James Pendergast, in Syracuse, N. Y. . . . F. E. Smith is practicing in Denver, Col. . . . H. J. Snyder is practicing at Schoharie, N. Y. . . . C. H. Taytor, assistant in surgery in the N. Y. S. V. C. . . . F. E. York is practicing in Brookfield, N. Y. . . . M. C. Thompson is practicing at Newburg, N. Y. . . . J. Traum is a Government inspector in Chicago, Ill. . . . W. Treman is associated with Dr. English, of Jersey City. . . . P. V. Weaver is assistant for Dr. Bell in Brooklyn. . . . R. Whiting is preparing for Government inspection by taking a post-graduate course in the N. Y. S. V. C. His marriage to Miss Ida M. Coan of Ithaca, N. Y., took place Oct. 8th, at Niagara Falls, N. Y.

REPORT ON PERIODIC OPHTHALMIA.

By S. H. Kingery, Creston, Iowa.

Presented to the Meeting of the Iowa-Nebraska Veterinary Medical Association, at Omaha, Nebraska, October 12, 1905.

Observation is the basis of all investigation, but observation in the narrower sense need not be particularly treated here. To recognize certain diseases, those of the conjunctiva, for example, by merely looking at them, and it is only necessary to see them often enough in order to have their essential characteristics well impressed on the memory. In this way we think we are able to recognize many diseases of the lids, of the conjunctiva, of the cornea, and of the iris; but are we? Observation, therefore, alone without accessories, would leave us in the lurch.

Recurrent or periodic ophthalmia is said to be an inflammatory affection of the interior of the eye, but that throws no light on the pathology, and are we not still groping in the dark as to what it is and its causes, but positively know its results? As to the causes, I have nothing new to offer, but humbly ask for information.

We will now dwell for a short time on the changes that take place in its progress. We see hyperæmia in various structures, which is not, strictly speaking, a disease, but merely a token of disease, and which accompany a large number of inflammations of the eye. If the hyperæmia becomes so pronounced, which it invariably does, that an exudate is formed, there is general inflammation of the interior of the eye. This exudate may be extremely scant, fibrinous, deposited on the anterior or posterior surface of the iris, the pigment layer at the edge of pupil becoming adherent in places to the capsule of the lens—posterior synechia. Pain is not always proportionate to the severity of the attack, the lachrymation and photophobia being in this respect much more trustworthy guides. Many patients have been brought to us with the client remarking, "Doctor, this horse's eye (or eyes, as the case may be) seems to be clouded," and, in looking at an affected eye, there is noticed:

First, pericorneal injection, in which the red color due to the blood increases in intensity according to the severity of the inflammation;

Second, a loss of the velvety blackness of the pupil. This is the result of a moderate haziness of the aqueous, with or without flocculi;

Third, a loss of smoothness and polish in iris. This is the result of a delicate fibrinous exudate upon the back of iris;

Fourth, a contracted, nearly immovable, unsymmetrical pupil. The posterior synechia protrude into the pupillary area as small brown dotlets.

This condition is detectable by the use of atropia. Atropia, therefore, is an indispensable accessory to the diagnosis of internal inflammations. Unfortunately, its use is very often neglected, and many cases of internal inflammations fall into the veterinarian's hands after having been mistreated as a conjunctivitis. Hyperæmia accompanies internal inflammations almost without exception. The case may run its course in two to four weeks, even without treatment, and apparently leave no particular disturbances in its trail. The exudate becomes absorbed, the adhesions are broken up, undoubtedly by the ceaseless activity of the play of the pupil, as the owner reports eye cleared without any treatment; but such a favorable course must be an exception in untreated cases. It is rather the rule that adhesions to the capsule of the lens become permanent by the change of the exudate into connective tissue. It must be remembered that the iris is extraordinarily inclined to relapses; hence the name periodic or recurrent, and that adhesions but increase this tendency.

The greatest danger to vision lies in the circumstance that the entire pupil may be filled with exudate, as is very often the case, during one of several attacks of severe internal inflammation, and that this exudate becomes organized into a connective tissue membrane, and that vision is necessarily reduced, as we have often seen it, to the mere perception of light, a condition that might with propriety be termed occlusion of the pupil.

But matters change when, with or without occlusion of the

pupil, repeated relapses, as we see them, do occur; and in this case, the eye shows the aqueous more hazy and increased, as recognized by the greater depth of anterior chamber, the retinal veins tortuous.

Although the cornea has not, and cannot have, bloodvessels of its own, it is by no means cut off from the nutrition supplied by the blood current. At the corneal margin superficially there lies a network of bloodvessels ready at any moment to push on into the cornea new formed vessels, as you have no doubt observed them, which condition, if not arrested, rapidly approaches the severe inflammatory form in which the exudate, rich in pus cells, saturates the tissues of the iris, and its overflow settles in the anterior chamber. The color of iris now becomes a greenish yellow, so characteristic in this disease. Hyperæmia of bloodvessels can be plainly seen, and rupture of some undoubtedly takes place, as is indicated by change of color of aqueous, light to red. This, being mixed with pus cells that have already escaped, can be plainly seen to change its location as head is moved.

Again, this hypopyon, or collection of pus in anterior chamber, is susceptible in numbers of cases of such a rapid absorption that no trace of it may be detected the next day, much to our surprise. We have had it happen in several cases.

Relapses come and go, but the result is the forming of a circular adhesion between iris and lens. Now the aqueous accumulating in the posterior chamber, as is the case earlier in the progress of the inflammation, which results in the iris bulging forward, the eye's tension increased, as you all know; and, if some radical operation be not resorted to and thus reëstablish connection between posterior and anterior chambers, as we have partial occlusion now, the eye will be hopelessly lost from the resulting increase of pressure within it. Numbers of cases go this route annually.

Prognosis.—Doubtful.

Treatment.—Various forms of treatment have had their trials, with success by some veterinarians, others very little, if

any. General tonics internally are indicated in all cases. The most important element in my mind in the treatment of internal inflammations must be the effort to prevent or overcome as far as possible these adhesions between iris and lens. For that reason atropia is the drug indicated. Kali-iodide, adrin, or epinephrin hydrate and boric acid locally. Corneal punctures repeated are useful to release aqueous deposits when tension is pronounced. I have not tried iridectomy as yet, but would like to see it tried, especially where we have adhesions and they so extensive, as we see them sometimes, as to threaten total synechia during any future recurrence.

In conclusion, I wish to say that, in presenting what I have to you, gentlemen, I have done it with the object of enlightenment, and hope the discussion following will help all. I am not sure but that the profession along this line is, and has been, drifting with the tide, from which I hope each one of us thus afflicted may raise his individual standard higher. To err is human, but is it not true we all guess and trust to luck when it comes to the diagnosis and treatment of the eye? I ask with all sincerity, how many of you, gentlemen, are satisfied with yourselves along this line? I can openly answer for one: I am not.

IDLE HOURS PUT TO GOOD USE.—While spending an enforced protracted visit to Nashville, through the presence of an impenetrable quarantine against his Louisiana home, on account of yellow fever, Dr. W. H. Dalrymple occupied his time in preparing a splendid bulletin on Texas fever, giving a general summary of our knowledge of the subject to date. He concludes with a plea in behalf of the cattle industry of the South, showing that with federal assistance the great parasitic pestilence can be removed from the pasture fields of Dixie, and through this means the greatest embargo on this vast source of revenue can be raised. He also assisted in growing some *Stegomyia fasciata*, which astonished some of the natives, who were ignorant of the presence of the yellow fever mosquito in the Tennessee Capital. Through it all, he kept contributing articles to the papers upon subjects and in a manner to create a better understanding of and greater confidence in his beloved profession.

VON BEHRING'S STATEMENT AT THE PARIS TUBERCULOSIS CONGRESS OF OCTOBER, 1905.

TRANSLATED BY L. VAN ES, M. D., V. S., AGRICULTURAL COLLEGE, FARGO, N. D.

The current number of the "*Tydschrift voor Veeartsenykunde*" contains an authorized French translation of v. Behring's communication, a free rendering of which into English may be of interest to REVIEW readers. It runs as follows:

During the course of the last two years, I have come to recognize with certainty the existence of a curative principle, entirely different from the antitoxic principle which was described by me fifteen years ago.

This new curative principle plays the essential part in the immunizing action of my "bovovaccin," which since four years has given an account of itself in the fight against bovine tuberculosis in agricultural practice. This principle depends on the impregnation of the living body cells by a substance derived from the virus of tuberculosis and which I have named T C.

When T C has become an integral part of the tissue cells of animals treated with it, and when its properties have been changed by the cells, I designate it under the formula of T X.

In the tubercle bacillus T X or rather T C preëxists as an agent endowed with a great number of extraordinary qualities. This agent, in the bacillus tuberculosis, performs the function of a formative substance. Besides, it possesses fermentative (especially catalytic) qualities.

This agent can electively fix other substances by contact (a phenomenon known as "absorption"); furthermore, it possesses assimilative qualities. In one word it represents the apparent vital principle of the bacillus.

To me it appears that in the immunizing process of bovines against tuberculosis, the T C of the bacillus is freed from accidental substances; it exerts a symbiotic action on the interior of the body cells, more particularly on the cellular elements, which make up the germinative centres of lymph tissue. On

the one hand the presence of T C is the cause of the sensitiveness of Koch's tuberculin and on the other hand of the protective reaction against tuberculosis.

The road by which I arrived at the conception of the *method of anti-tuberculous* immunization sketched above, has been a long one and many obstacles had to be conquered. This conception of a cellular immunity, which is quite different from the humoral anti-toxic immunity, I would not have reached without a very intimate knowledge of the work of Metchnikoff on phagocytosis.

If I wished to demonstrate in detail the proofs of the correctness of my conception, I would be obliged to detain you for many hours. I have shown a part of them in the first fasciculus of a book which will be called "Modern phthisio-genetic problems and phthisio-therapy in the light of history." A few passages of this first fasciculus have just appeared in "Tuberculosis" of September, 1905.

I will only endeavor to describe the nature and mode of action of the new method of therapeutics, resulting from my scientific studies on tuberculosis.

This new method, I believe, has the calling to protect man, threatened by phthisis, against the deleterious consequences of tuberculous infection.

I consider it a great honor to be able to make before the general assembly of the Paris Congress a short communication on "A Means of Combat Against Tuberculosis by a New Remedy."

I suppose that my method of vaccination against bovine tuberculosis is known. Without having a desire to insist, one must be willing to admit, that I have considered all the possibilities of applying this procedure in combating human tuberculosis. My experience, however, has caused me to definitely reject the introduction into the human body of living tubercle bacilli for a therapeutic purpose.

Therefore, the anti-tuberculous treatment in man commences, as far as I am concerned, with the discovery of the remedy about which I will speak.

After the above made sketch of the immunization method against tuberculosis, it will be clear without further details, that I have busied myself, without interruption or rest in order to spare the body the tedious and dangerous task of the elaboration of T C. To this I have come by experiments *in vitro*. Speaking according to Ehrlich, I have transformed an active immunization into a passive immunization. I can assure you, that but rarely in my life I have experienced more joy, than during the days, weeks, and months, when the casual connection which binds vaccination to immunity appeared to me with an ever-growing clearness, as a result of the repeated observations during innumerable experiments on animals; one riddle after another solved itself as to the nature and mode of action of anti-diphtheritic serum.

Condensing in a few words the results of my labors, I will say that in order to set free T C from substances which hinder its therapeutic action, it is well to destinguish three groups of bacillar substances:

1st. A substance only soluble in pure water and which possesses a fermentative and catalytic action. From this substance, soluble in water, the toxic ingredients of Koch's tuberculin are derived. This substance has all the chromophilic, physical and chemical qualities of Volutine, described by our Marburg botanist, Arthur Meyer. I call this substance T V. In order to give an idea of the toxic power of T V, I can say, that one gramme of this substance, in the dried state, is more powerful than one liter of the tuberculin of Koch.

2d. A globulinous substance, only soluble in neutral salt (for example, the chloride of sodium at 10 per cent.); this substance is named by me T G L; it, also, is toxic in the manner of Koch's tuberculin.

3d. Several non-toxic substances, soluble only in alcohol, ether, chloroform, etc. When the tubercle bacillus is once freed of these three substances, there remains a body, which I designate as "Restbacillus."

This Restbacillus still possesses the form and staining quali-

ties of the bacillus tuberculosis. By means of suitable preparations, it may be modified in such a way, that it becomes an amorphous substance directly absorbable by the lymph cells of the guinea-pig, rabbit, sheep, goat, bovine and horse. The amorphous substance is acted upon and changed by the lymph cells of those various animals and the cells become oxyphilic or eosinophilic. Parallel to the metamorphosis of the cells under the influence of T C, the state of immunity of the body is evolved. A fundamental fact is that T C, a non-reproductable substance, possesses in the meanwhile the power of giving rise to tubercles. *The tubercle thus formed does not caseate and never softens.* It corresponds exactly with the tuberculosis granulation of Laenec. Under certain conditions T C can also determine the "gray infiltration" and the "gelatiniform infiltration" of Laenec.

By experiments on different mammalia, I have been able to convince myself that T C preëxisting, as I have said, in the bacillus tuberculosis, may be formed *in vitro*, in such a way as to form a remedy, which also may be applied, without danger in human therapeutics. The therapeutic part of my book, which should appear next year, will not be published until the therapeutic efficiency and the harmlessness of my new remedy will be demonstrated by clinicians, more versed than myself in the knowledge of the individual varieties of pulmonary phthisis and its prognosis.

On the other hand, it appears to me necessary that other scientists, working in other laboratories, check the therapeutic action of my remedy on animals and observe the fact, thus far known, of a therapeutic agent of a similar value. You know that until now, Koch's tuberculin and his new tuberculin (T R), Maragliano's serum, that of Marmorek and many other preparations mentioned as specific, have had, according to their inventors, a preventive and curative effect; but you also know, that following them, many other observers have not succeeded in obtaining similar good results, especially in the guinea-pig.

I hope to be more fortunate and also that those scientists to whom upon my return to Marburg, I will entrust my remedy, so that they may experiment with it, will obtain in their laboratories results of the therapeutic effects as good and even better than myself.

I beg you not to forget that my communication of to-day recalls singularly the one which I made in 1890 on a new remedy against diphtheria. My conviction of the capital importance of this discovery has, in the course of those fifteen years, been confirmed in the whole world in a glorious fashion.

However, after my communication, there passed not less than four years before the practitioners became confident. Maybe I would have waited still longer for the knowledge of the correctness and importance of my scientific assertions, had not my great friend, Emile Roux, arisen at Buda-Pesth, in order to fight with me the "murderess of children," diphtheria.

How much time will yet have to pass before the discovery and use of my new remedy against tuberculosis receives the public sanction, which will give it the stamp of practical value, I do not know. Many factors here may intervene, my pleasure in the work and my activity, my skill as a tactician and also good fortune, that it may give me a battle companion of the value of Roux, having the same conquering force and the same disinterestedness beyond all suspicion, and yet I hope that the next tuberculosis congress will take notice of considerable progress accomplished in the battle against human phthisis.

IS GERMANY REAPING ITS REWARD FOR ITS EMBARGO ON AMERICAN MEATS?—*Berlin, Oct. 12.*—The meat famine in Germany has reached a crisis. Horseflesh has risen in price and dogflesh is no longer obtainable. Many municipalities have begun buying carloads of sea fish at the coast towns and selling them at cost price to their citizens. This expedient was first adopted at Solingen, but has now spread to various Westphalian cities, to Posen and even to Bavarian towns. Reports from all parts of the country describe measures that are being taken to abate the famine. The price of meat has risen nearly 50 per cent. in the past year.—(*New York Journal, Oct. 12.*)

RESOLUTIONS ADOPTED BY THE VIIITH INTERNATIONAL VETERINARY CONGRESS.*

Translated and Arranged by ADOLPH EICHHORN, B. A. I., Great Bend, Kansas.

I took the earliest opportunity to arrange and translate the resolutions adopted by the VIIIth International Veterinary Congress at Budapest, hoping that the members of the profession will find it of great interest to learn the results of the work which that body of the most eminent men of our profession carried out on that occasion, on scientific questions of the utmost importance, not alone from the standpoint of animal husbandry, but also from a still more important standpoint, the protecting of the human family from dangers of infection through animals.

Suppression of Tuberculosis in Domestic Animals.

1. The suppression of bovine tuberculosis is urgently necessary, not alone on account of the great economic losses it inflicts, but also for its danger of infection to the human race.

2. The stock owners can adopt measures to suppress bovine tuberculosis, and their aim should be directed toward it. The suppression should consist in slaughtering all animals which would spread the infection, and protecting calves and healthy animals from infections. The governments should assist in the eradication of bovine tuberculosis, by educating the people as to the nature of the disease, of the mode of infection, and of the importance of the tuberculin test. In the suppression of bovine tuberculosis, tuberculin is the most recommendable diagnostic agent. The dosing of tuberculin and the distribution of the same, should be under government control. Tuberculin should be delivered only to veterinarians.

3. It is also recommended to adopt legislative measures in the work of suppressing bovine tuberculosis. If they are applied in the right direction, the spreading of the disease may be

[* The resolutions referring to the prophylaxy of tuberculosis, vaccination against tuberculosis, to establish uniform principles to estimate the reactions of tuberculin and mallein, were published in the November REVIEW, pages 783-785 having been translated and forwarded by Prof Liautard, but they are included here on account of their importance and the differences in translations.—R. R. B.]

prevented and may result in the gradual diminishing of the disease. The legislative measures should require: (a) that it shall be compulsory for veterinarians to report all cases of tuberculosis which come under their observation; (b) that owners of tuberculous animals, which are dangerous for spreading the infection (as animals with tuberculosis of the udder, uterus, intestines, also the lungs) should receive financial compensation from the State and be slaughtered. Creameries should be prohibited from returning skimmed milk without its sterilization.

Protective Inoculations against Tuberculosis.

The VIIIth International Veterinary Congress requests the governments to aid with the necessary means the experiments on protective inoculations which may be extensively adopted according to different circumstances. However, until the establishment of the definite value of the protective inoculations, the successful veterinary police measures used up to date should be continued in the future.

The Establishment of Uniform Principles for Judging the Tuberculin Reaction.

1. The production of tuberculin and its distribution should be placed under government control.

2. Such cattle only are to be submitted to the tuberculin test as those whose temperature at the time of injection does not exceed 39.5°C.

3. In animals having a temperature at the time of injection below 39.5°C., a rise to 40°C. or over should be considered a positive reaction.

4. A rise in temperature to 39.5°C. and not over 40°C. should be considered as a doubtful reaction, and every case is to be considered individually on its merits.

The Establishment of Uniform Principles for Judging the Mallein Reaction.

1. From a diagnostic standpoint the mallein reaction can only be considered positive when it produces a typical reaction.

2. A reaction is typical when the temperature rises at least 2° C., at the same time that it does rise to over 40°, and during the first day the fever line shows a plain or two summits, and on the second and sometimes even on the third day a slight or higher elevation is present. The rise in the temperature is accompanied with a local and general reaction.

3. The risings below 40°, also those without a typical reaction, demand a reëxamination.

4. The slow rising to a stationary high temperature proves glanders even then, when it otherwise deviates from a typical reaction.

5. The typical local infusion at the place of injection is a positive sign of glanders even then, when the rise in temperature and also the general organic reaction is absent.

6. All animals submitted to the mallein test, whether they reacted or not, should always be tested the second time in from 10 to 20 days.

7. The production of mallein should be exclusively carried out in State scientific institutions or in such which are under State control.

8. The Congress requests the governments to send out commissions to establish definitely the value of mallein and also for the establishment of the doubtful manifestations in the mallein reaction.

Preventive Inoculations against Foot-and-Mouth Disease.

1. Experience proves that the established, restrictive sanitary police measures adopted immediately after the appearance of foot-and-mouth disease, under veterinary supervision, are followed by excellent results.

2. It is advantageous if one government notifies the other by telegraph of the appearance of the disease.

3. Considering the interesting results with the protective inoculations, the Congress found it desirable that the governments should study the practical value of these inoculations.

Suppression of Hog Cholera with Reference to Protective Inoculations.

1. For the suppression of hog cholera (under which in a broader view the frequent mixed infections with swine plague should be understood), sanitary police measures and hygienic provisions are necessary.

2. Up to date there are no protective nor curative inoculations known which could be recommended. Further experiments will have to determine whether the present methods are to be followed or new methods should be looked for.

The Extirpation of Rabies.

I. Measures for the suppression and final extirpation of rabies in a State can only be successful when the veterinary police

protective regulations in neighboring countries are also adequate and strictly executed. It is, therefore, urgently necessary that the action of veterinary police in all countries with regard to hydrophobia, should be based on the same principles.

II. Compulsory notification hitherto held necessary only for cases of actually rabid or suspect animals must henceforth be extended to animals bitten by rabid or suspect dogs. This obligation shall be incumbent, not only on the owners and on all persons included under Section 9 of the law of infectious diseases, but also on all such persons as know that animals have been bitten by such dogs.

III. It is to be considered whether it be not desirable to extend the quarantine for dogs to a wider space than hitherto, and to a longer time than three months.

IV. It is desirable that a law equally valid in all countries, and strictly executed, should be introduced, for the control of dogs, and that this law should contain the following provisions:

1. Every dog in town or country, without exception, is to be registered and entered in a list for assessment;

2. All dogs registered are to be provided with a badge on the collar, such badge bearing the name of the owner and the dog's number in the assessment list;

3. Dogs without badges are to be impounded, and unless claimed within a certain period destroyed.

SECTION OF PHYSIOLOGY.

Milk and its Treatment, with Special Regard to the Reform in Milking, in Accordance with Hygienic Requirements.

1. It is necessary that milk hygiene, the bacteriological practice of milk and the police control of milk should be taken up as a subject in the curriculum of veterinary high schools.

2. Strict control should be kept that names as "milk free from tuberculosis," "milk for children," "hygienic milk," and similar other expressions should not be used for means of advertisement, and that the marketing of such milk should demand certain requirements. These are the continual control of the health of the animals, their feeding and stabling, cleanliness during milking, and immediate cooling of the milk after milking.

It is necessary for the legislative regulations relative to the control of milk, to express that the milk brought to market be free of all foreign particles. For the practical control of this the following method may be recommended: the milk which is

to be examined is placed in a one-litre vessel of light glass, in which no sediment should form inside of three hours.

Falsification of Meat and of Alimentary Meat Products, and New Methods of Examinations for their Determination.

The VIIIth International Veterinary Congress decides, that only agents known to be harmless—as salt, saltpetre, sugar, further smoking—may be used for conservation of meat and its products. All other substances which are purposely added to them, with the object of conservation or coloring, should be prohibited: (1) because they are used for defrauding purposes, or to improve the appearance of the goods from its natural state; and (2) because their ill effects on the health are uncertain.

The Question of Molasses Feeding.

The physiological section of the VIIIth International Veterinary Congress decides that molasses is an important food, from an economical and dietetical standpoint. The determination for the material which is to be used for its absorption should be based on physiological and economical principles.

PATHOLOGICAL SECTION.

Relationship between Tuberculosis of Men, Cattle, Poultry and of Other Domestic Animals (Especially of the Dog).

The Congress expresses:

1. That bovine tubercle bacilli may infect men; that tubercle bacilli may be found in men which can be very dangerous to cattle; that in certain cases mutual infections are possible.

2. It is desirable to search further as to what degree tuberculosis of fowls endangers men and other mammals.

3. That by no means can the preventive measures be spared which are useful to protect men from the danger of bovine tuberculosis.

DR. MARK WHITE, JR., Denver, Col., was called to see a cow supposed to be choked. She proved to have a two-inch sack needle sticking through her tongue.

AT the reception given by the Grand Duke Joseph at the Royal Palace to delegates to the XIIIth International Veterinary Congress, Drs. Pearson, Eichhorn, Moore, and Kelly received invitations. Dr. Pearson was honored by quite a long interview with the Grand Duke.

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

SARCOMA OF THE INFERIOR MAXILLA OF A HORSE.

By A. T. KINSLEY, M. Sc., D. V. S., Kansas City, Mo.

About the 10th of August, '05, a grey gelding, used in a transfer barn, began to diminish in flesh and had little desire to eat. It was thought that the horse had been overworked and only needed a few days' rest to recuperate. After he had remained in the feed lot 3 or 4 days and did not regain his appetite the stable man made a more careful examination and found an enlargement on the left inferior maxilla, and, supposing it was an abscess, sent the horse to the hospital for treatment.

A careful examination revealed no defect of the teeth. The growth was apparently attached to the maxilla, was quite hard and no pus or other pathological fluid was found on exploration. No specific diagnosis was given except that the growth was a tumor of some kind.

The horse was returned on August 30, '05, as he was unable to eat, was very weak and emaciated; the tumor had rapidly increased in size; it was distinctly observable from a front view, being on the left inferior maxilla (see cut 1); the extent of the growth is more clearly shown by the curvature of the crown piece of the halter (see cut 2).

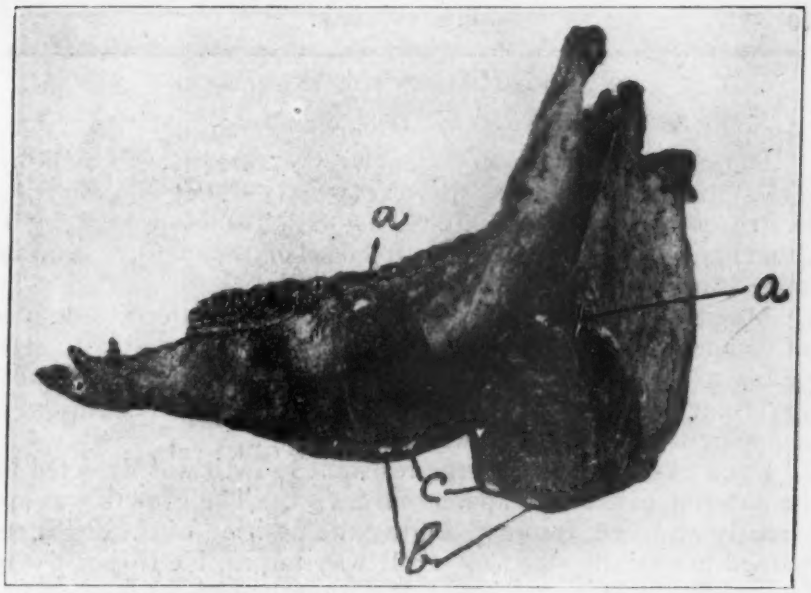
Post-Mortem.—A new growth about the size of a cocoanut and of about the consistency of fibrous connective tissue was found just anterior to the angle of the inferior maxilla. (See cut 3.) On section there were only three small points that contained any osseous tissue. (See cut 3, a, b, c.) The destruction of the osseous tissue was so complete that the third, fourth and fifth molar teeth were easily removed with the finger and thumb.

The lymphatic glands of head, entire cervical region and anterior thoracic region were normal, as were all other structures except the left inferior maxilla. The growth was diagnosed microscopically, from sections of embedded tissue, mixed-celled sarcoma. (See cut 4).

NOTE.—Ll. Champlain, D.V. S., Photographer.

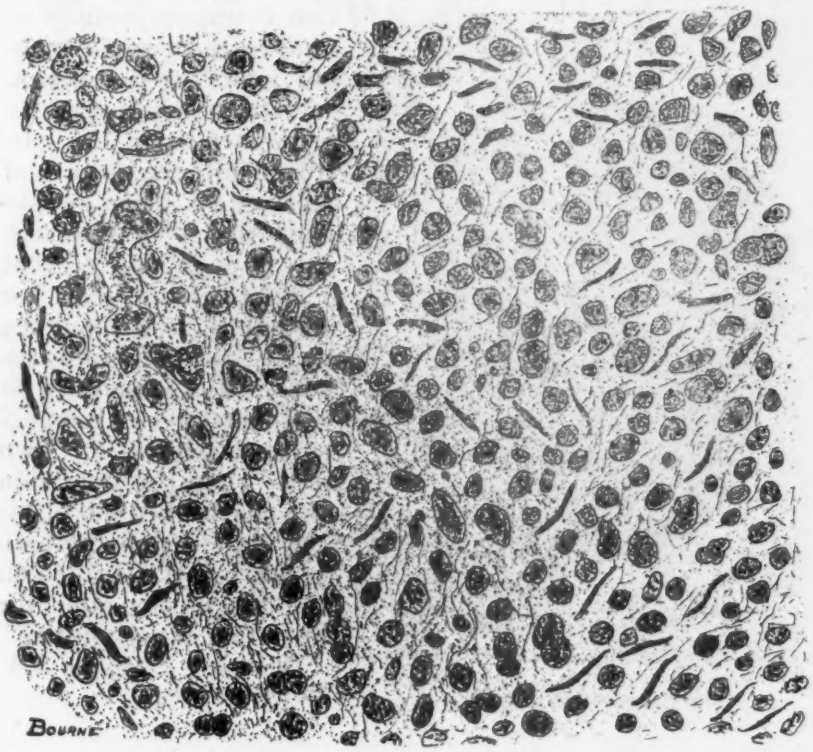
CUT 1.
Showing the tumor on the angle of left inferior maxilla.

CUT 2.
Showing extent of tumor.



CUT 3.

Left inferior maxilla divided just anterior to angle showing extent of tumor and three small points of bone, a, b, and c.



CUT 4.

Microscopic section of tumor showing variety of cells. ×600.

AN ABDOMINAL TUMOR IN A DOG.

By A. T. KINSLEY, M. Sc., D. V. S., Kansas City, Mo.

An English male pointer dog, about six years old, was brought to the clinic of the Kansas City Veterinary College on September 18, 1905, for treatment. The dog had been kept by a private family and allowed the freedom of the yard, was quite active and a very hearty eater.

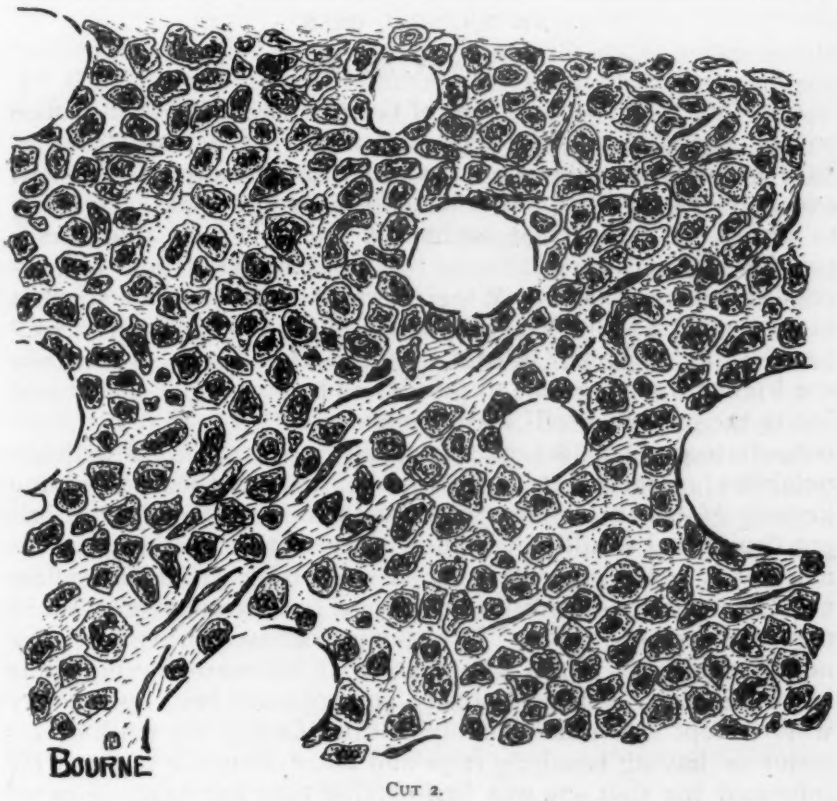
About the first of July, 1905, the dog was noticed to be less active and would frequently refuse to eat any food at all. He gradually became emaciated, was less prone to exercise and would not touch food for three or four days at a time, although he apparently drank more water than usual.

Upon examination, a large resistant growth was detected in the anterior part of the abdominal cavity. The growth was apparently attached, for on changing the position of the dog it remained practically stationary. It was impossible to positively determine the exact nature of the growth without an exploratory operation. The dog was anæsthetized, the abdominal cavity opened and explored, and a tumor was found attached to the stomach and mesentery, and so closely adherent to the spleen that it was impossible to remove the growth without removing that organ.

CUT 1.
Showing lobulation of tumor.

The tumor apparently originated from the gastro-splenic omentum and received its blood supply from the splenic vessels. It was lobulated (see cut 1), weighed sixty-five ounces, and was about the consistency of brain tissue. Microscopically it was found to be a lymphosarcoma (see cut 2). Two days after the operation the dog walked out of his cage and was photographed (see cut 3). He died on the fourth day after the operation of peritonitis.

NOTE.—Ll. Champlain, D. V. S., Photographer.



CUT 2.
Microscopic section of tumor showing lymph vessels and sarcomatous cells. ×600.

CUT 3.
Showing dog two days after operation.

AN UNUSUAL CASE.

By H. FULSTOW, V. S., Norwalk, O.

On Jan. 3, 1905, Mr. Moss, of Greenwich, called at my office with a five-year-old bay mare, and said that he would like to have her spayed. Upon inquiry, he said the mare was all right except when in heat, but when in heat would kick everything to pieces. He said that perhaps I knew her. I told him I could not place her just then. "Well," he said, "you remember last spring that Dr. Wiggins wrote you about a mare that kicked, and asked what you would charge to operate on her." I said I did. "Well," he said, "shortly after getting your reply she kicked his buggy all to pieces and he got disgusted and sold her to me. Now I will leave the mare with you and when she is ready to go home let me know, and I will ride home with my neighbor. Shortly after he came back and got the mare, saying he was going to take her home with him as his neighbor had got drunk and would not let him ride; but he would bring the mare back again in a few days. I said all right, but did not expect to see him, thinking some one had discouraged him in regard to the operation. But upon my arrival at my office the next morning, I found him there with his mare, having come in 18 miles. I looked her over; she appeared healthy in every way, except she was very much drawn up in the flank on account of having two long trips and not very much to eat. He informed me that she was just getting over her heat. I never thought to ask him if she had been bred after looking her over and seeing she was so gaunt, and his telling me that she was just getting over her heat. I said I would write him when he could come after her, and he departed. I washed her out that day and the following day starved her; the third morning got her ready to operate upon. After dinner put her in the stocks and proceeded with the operation. After cutting through the vaginal wall, and, with the back of my right hand on top of the uterus, going after the left ovary, I thought it felt hard below; so I turned my hand over and felt, and, to my surprise, found she was in foal. So I came out without removing the ovary, thinking she might strain and throw out the intestines and fœtus, and that would be the end of her. But, after thinking it over for a minute, I decided to remove them anyway, and trust to luck. So, after washing my hands and arms, in I went and removed one ovary after the other. I sponged her off externally, let her out of the stocks, and placed her in a well-

bedded box stall. Gave her mashes, with soda hyposulphite ℥ i, three times a day. Kept her seven days and she never missed a feed. Then informed owner to come and get her. When Mr. M. came after her, I informed him that she was in foal, asking him when he bred her. He said in June, to a son of Wilton. "Well," I said, "I expected her to abort before this, but when she does let me know," which he promised to do.

But, not hearing anything from him until this summer, I wrote him in regard to her. A few days afterward I received a letter saying the mare foaled a nice live filly in May; that it was well developed and spry as a kitten, and that the mare had never kicked since.

I talked with several physicians (M. D.'s) and also with several prominent veterinary surgeons, some of whom were professors in the colleges, in regard to whether this foal would develop or not, and there were a great many different opinions, some claiming it would mummify, others that she would abort, and still others thought it would develop all right.

I have never known of a case like it before; that is why I have written this for the REVIEW.

DIAPHRAGMATOCELE.

By E. L. MOORE, D. V. S., South Dakota Agricultural College, Brookings, S. D.

The patient, a bay gelding, weighing about 1,200 pounds, was used on the tank wagon of a threshing outfit. The history was that on the Thursday preceding, the horse had been driven to one of the lakes in the immediate neighborhood and that evening had been fed heavily on oats, "a bushel apiece," without any hay. On the way to town the following day the horse was taken sick and threw himself violently to the ground "until", as the owner expressed it, "I thought he would break his ribs". Reaching town that evening (Friday) an empiric was called, who diagnosed the case as "trouble with his water-works", and gave during the night spirits of nitrous ether, laudanum, sulphuric ether, and what else the owner knew not. As a final resort the empiric gave a vapor bath, applied hot salt and turpentine to the horse's loins, and placed a piece of onion in the end of his penis. Receiving a call on Saturday morning, after a twenty mile drive I reached the much "doctored" horse. Animal bathed in perspiration, pulse at maxillæ imperceptible, conjunctiva injected and of a dark red color, respirations labored

(about 26), temperature 103.8° F. Pawing with the front feet, occasionally looking toward the left side of the body and lying down, usually stretching out on his side. On causing him to stand, a rectal examination revealed the presence of a few balls of fæces, dry, easily breaking up, of a sour "ensilage-like" odor, and consisting of unmasticated and undigested oats; the cæcum and colon full of fæces of a doughy consistency. A diagnosis of intestinal obstruction, probably involving the small intestines, was made and a doubtful prognosis given. It may be noted that the attendants stated that during the preceding night he had frequently sat on his haunches like a dog, remaining in this position for a few minutes at a time; however, at no time while under my care did he assume this position nor did he throw himself violently to the ground. He was given one ounce of nux vomica and two ounces of ammonium carbonate in the form of balls, shortly followed by two ounces of oil of turpentine, two ounces of aromatic spirits of ammonia, and raw linseed oil sufficient to make one and a half pints. Copious rectal injections of cold water and soapsuds were given at half-hour intervals. In two hours the horse was easier, conjunctiva clearer, but pulse imperceptible. Although straining violently at intervals, no fæces were passed. Later he stood quietly, resting first one hind foot then the other, and was removed to a dry stall, staggering slightly as he walked.

At 2.00 A. M. he fell on his right side dead. He was dragged out of the barn and a hurried post-mortem made by lantern light. Large intestines normal in appearance; to the left of the median plane and somewhat dorsal was a vertical rupture of the diaphragm about a hand's-breadth in length and through which passed twelve or fourteen feet of the small intestines. This portion had become strangulated and was of a port-wine color. The chest cavity was not auscultated in making an examination of the patient ante-mortem. This was an important omission.

TWO INTERESTING CASES OF AZOTURIA.

By GEORGE ALEXANDER DICK, D. V. M., Kane, Pennsylvania.

Case No. 1.—Was called to see beautiful Percheron mare, weighing 1,800 pounds, at 3 P. M. She had been standing in the stable for a week and was taken out to be exercised right after dinner. The mare had gone but a short distance, when she became unsteady on her hind limbs and shortly she fell down, but got up at once and was taken to the barn. When I

reached the stable the mare was in some pain, lying down and rolling and then getting up; would walk around the box stall two or three times and lie down again, all the time passing considerable flatus. Pulse and temperature normal. I diagnosed the case "colic," and administered chloral hydrate, ℥i, which seemed to ease her at once. At 7 P. M. of the same day, the stableman came running to me and said the mare had azoturia, and if I didn't hurry she would be down before I got there. We hurried to the barn; the mare was walking around the stall in great pain, with perspiration dripping off her, and her hind quarters lowered half way to the floor. Three men held her while I quickly catheterized her and I got a flow of characteristic coffee-colored urine that we find in azoturia. The instant the urine started to flow the mare began to straighten up, and by the time I had relieved her of all her urine (there was about two quarts) she seemed as well as ever, but I administered sodium bicarbonate (℥viij) and followed with epsom salts (lb.i) and strychnia (gr.i). The mare has never shown any signs of azoturia from that time.

Case No. 2.—A Percheron team—a horse and a mare—had been standing in the stable a week; they were hitched to sleighs and had gone but a mile when both went down, and were unable to rise. They were both hauled to the stable on sleighs, and about the same time I arrived. I diagnosed the cases as azoturia, and as neither of them had urinated I proceeded to catheterize them. I first catheterized the horse and got about two quarts of characteristic coffee-colored urine, and then I catheterized the mare, but instead of the coffee-colored urine I got a flow of about two quarts of *normal colored* urine. The symptoms in the mare were in other respects the same as the symptoms of the horse. I administered soda bicarbonate (℥viij) followed by epsom salts (℥viij) and strychnia (gr.i). The sodium bicarbonate and epsom salts were repeated in an hour. Both animals made rapid recoveries.

VENTRAL HERNIA IN A MARE.

By M. M. WHITE, B. S., M. D. C., Shreveport, La.

On July 1, I was called by Dr. T. E. Schumpert, of this city, to go to Bethany, a town about twenty miles away, to see his fine race mare.

The mare, having a five-months'-old colt, was sent out to pasture and by a reliable man, made the trip fine, but next

morning a swelling was found under the belly, as was reported to Dr. Schumpert, and by him to me.

I could not go at the time, and never heard any more from the mare until August 20, when she was brought back to town. She was very much emaciated, and had an enormous enlargement on both sides just in front of the stifles.

The doctor telephoned me to see the mare, which I did. I was instructed by the doctor to have the mare destroyed if the enlargement could not be reduced. I diagnosed it as hernia and had her destroyed.

Post-mortem :—Rupture of the abdominal wall just to the right of the median line, extending from the pubis toward the sternum, about eighteen inches in length. There was no inflammation present. The edges were smooth and glistening and had healed entirely.

THREE of the chief cities of Ohio (Dayton, Columbus and Cleveland) have municipal meat and milk inspection laws.

THE English Parliament will be asked to offer a $200,000 prize for a cure for consumption, and as the project has the approval of the Government, its adoption is assured. This is the outgrowth of the discussions at the Tuberculosis Congress. It is expected that the prize will stimulate research in time for the result to be announced at the next Tuberculosis Congress, which is to be held at Washington in 1906.

WANT TO AFFILIATE THE ONTARIO VETERINARY COLLEGE WITH TORONTO UNIVERSITY.—On November 8th, Hon. Nelson Monteith, Minister of Agriculture for Ontario, was waited upon by a deputation, consisting of the Educational Council of the Ontario Veterinary Association, with a request that the Ontario Veterinary College be affiliated with the University of Toronto. The members of the deputation were Dr. C. Elliott, St. Catherines, Chairman ; Dr. J. G. Rutherford, Dominion Veterinary Director-General ; Dr. Andrew Smith, Principal of the Ontario Veterinary College ; Dr. Tennent, London ; Dr. Quinn, Brampton, and Dr. Lawson, Dundas. The object is to bring the institution under the control of the Government, with a view to raising the entrance examination, extending the course from two to three terms, and raising the standard of the profession to equal the best in Britain or the British possessions. Mr. Monteith promised to bring the matter before his colleagues, and also before the University Commission.—*(Farmer's Advocate, Nov. 22.)*

SURGICAL ITEMS.

By Drs. Louis A. and Edward Merillat, Chicago, Ill.

PRESENT-DAY KNOWLEDGE ABOUT TETANUS.

Tetanus has been recognized and described as a fell disease of mammals since the days of Hippocrates. It was mentioned by hippiaters of the pre-Christian era. During all of these centuries and until 1854 its pathogenesis was shrouded in mystery. Billroth, during the 50's, basing his deduction on clinical observations, asserted that it was due to a virus elaborated in or inoculated into a wound. The mysterious cases having no perceptible preëxisting trauma were ascribed to exposures to cold or over-exertion. Thus, during the 50's, 60's, 70's and early 80's tetanus was supposed to be both *traumatic* and *idiopathic*. At times it was even thought to be epidemic or endemic, chiefly on account of the large number of cases that occurred in wounded soldiers after great battles. After Prague 4,000 soldiers died of the disease. In 1884 Nicolaier while studying the pathogenicity of the microbian flora of the soil was attracted to the numerous cases of tetanus that resulted in cavies and rabbits from subcutaneous inoculations of earth. He was able to reproduce the disease by inoculating other rabbits with the pus extracted from the wounds of those having died from the earth inoculations. Cultures made from the wounds of the dead rabbits were soon proven to possess equal virulency. The cultures made by Nicolaier were, however, not pure. They were a mixture of a variety of microörganisms. A few years later Kitasato succeeded in obtaining a pure culture of the specific agent by submitting the mixed cultures to the influence of heat. It was found that by heating the cultures to 80° C. all the microörganisms perished but one, a motile, pin-shaped bacillus, which was soon proven to be the real cause of the mischief, and which has since been known to the medical world as the *Bacillus of Nicolaier*.

During the next few years following Kitasato's discovery it developed that pure tetanus bacilli injected into suitable wounds were not capable of producing the disease unless associated with the other microörganisms. For a time this revelation threatened to upset the entire proposition. It was argued, and on pretty substantial grounds, that the *Bacillus of Nicolaier* was not the specific germ of tetanus because it would not propagate and produce the disease when experimentally inoculated into suscepti-

ble subjects. The confusion was soon cleared up when it was shown that if pure cultures, including the toxins elaborated *in vitro*, were injected into animals they proved to be actively pathogenic. Positive results were also obtained when the pure cultures were injected with other microörganism, notably the *Bacillus prodigiosus*. These experiments showed forcibly and conclusively that the accidental tetanus infection is always a mixed one, and that the associated microbes play the part of forming a suitable environment for the growth of the specific germ which unassisted was proven incapable of successfully resisting the battling phagocytes, and hence incapable of elaborating its poison in sufficient quantity to determine the disease.

The *Bacillus of Nicolaier* has a much wider dissemination than was once supposed. It is found in abundance in *rich earth*. In certain districts, if not in all cultivated lands, any given sample of earth contains them. It is found in abundance in *street dirt*, in the *intestines* and *dung* of herbivorous animals, especially in that of the horse, in the *dust* of dwellings, on the *stable floors*, on the *skin of animals* and of *man* working with the soil or in stables, in the *skin* of the *dirty boy's hands*, in the *dust of hay*, on *vegetables* such as potatoes, turnips, carrots, etc., which are soiled with earth, on *stable implements*, on the *clothing of hostlers*, etc., etc.

The specific germ, in fact, is found *almost everywhere*, like the microörganisms of putrefaction, but unlike the latter they are less frequently pathogenic, because their pathogenicity depends upon a chain of conditions which are seldom ever combined. First, they must be inoculated with other suitable microörganisms. These microörganisms must be capable of producing food that remains in the *sheltered field* for the growth of the specific germ. If they caused a phlegmon, the suppurating process would, in most instances, admit air to the wound and thus destroy the *anærobic* microbe of Nicolaier. An infiltration of serum sufficient to furnish food for the bacillus but without causing the formation of pus (in the strict sense of the term) is the only focus that will admit of a tetanic intoxication. Second, the wounds must be either *deep* or *perfectly sheltered*, and since such wounds usually become the seat of an acute abscess, tetanus is impossible from most of them. The *nail puncture* that inflicts but little, although just sufficient injury, is therefore the favorable environment. Third, the injured subject or at least the injured region must be incapable of offering adequate resistance to the microbian invasion. Animals in the best

of health require a much more virulent infection than those debilitated by overwork, poor diet and bad sanitation of the habitat. A tetanic infection of but nominal virulence would be destroyed by the leucocytes in a perfectly *healthy subject*, while the *debilitated* or *emaciated* would succumb. Experimental proofs of this are legion, and the statement is borne out by clinical observation.

The *physical* and *chemical characteristics* and the *physiological action* of the poison elaborated in the infected focus by the *Bacillus of Nicolaier* is the most interesting as well as the most important part of the study of tetanus, in that it abounds with various suggestions as to the appropriate therapy, and reveals the cause of the tenacity of the disease.

Tetanic toxin or the poison of the tetanus germ was studied by Nicolaier, Kitasato and Brieger soon after the discovery of the bacillus. The latter extracted several bases which he designated *tetanine*, *tetanotoxine*, *spasmatoxine* and *hydrotetanine*, each of which produced convulsions in experimental animals. The first two produce typical tetanus and death, while the latter causes ptyalism and convulsions. The product is obtained by filtration through porcelain, by which process it is separated from the microörganisms of the culture. It is a soluble product and is similar in its action to digestive ferments. Tetanic toxin is one of the most potent of poisons. Infinitesimal quantities are capable of causing death.

It is formed at the seat of inoculation only, as the microbes that produce it never leave the initial wound. It is not, like other toxins, absorbed by the lymphatics or bloodvessels, but follows the nerve trunks to the nerve centres, where it becomes "fixed" in the nerve cell protoplasm. Tetanic toxin loses its identity as soon as it reaches its destination. *It forms into a new substance that is permanent, refractory to any attempt at elimination, and no longer susceptible to the neutralizing effect of antitoxin.* These discoveries throw a vivid light on the stubbornness of tetanic spasms and expose the foolishness of many of the lines of treatment that have been recommended.

Tetanus is *acute*, *sub-acute and chronic*, depending upon the amount of toxin that becomes "fixed" in the nerve centres, which in turn is dependent upon the amount absorbed by the nerves. Acute tetanus is fatal in 100 per cent. of the cases, with the possible exception of canine tetanus. Dogs have recovered from acute tetanus, but the other mammals, including man, always succumb. The mortality of the sub-acute cases is about 80

per cent. and will depend much upon the *care*, the *treatment* and the *complications*. In the absence of complications the chronic cases nearly all recover in the horse, the ox and the dog.

What then should be the treatment? Given a sub-acute case of tetanus at its very beginning, the surgeon should make some attempt to arrest the formation of the poison at the seat of infection, providing the operation will not require transgression upon important organs: tendons, joints, synovial membranes, etc. Extirpation, re-amputation and free incision with antiseptic irrigations must not be omitted in view of what is known of the disease. While the benefit derived may not be immediately observed, it will have a perceptible effect upon the duration of the disease. To prevent the further elaboration and absorption of toxin is important. This being done, the next duty is to administer at least twenty cubic centimetres of antitetanic serum with the view of neutralizing the *free toxin* that has not become "fixed." The injections may be repeated every third day, especially in the cases where the wound has not or cannot be "fully extirpated." These two efforts, well executed, leave but a single pathological condition to deal with, and that is the "fixed" new substances in the nerve cells. With the assurance that no new poison will be added to that already localized in the nerve centres there will always be more assurance of a recovery. This latter condition must be treated with medicants that will tend to diminish the contractions of the muscles and with agents that will prevent constipation and colics. The standing position, maintained with slings comfortably adjusted, is essential, since tetanic large animals soon die in decumbency. Liquid food, enemata, removal of accumulated food in the buccinators are not to be omitted. Potassium bromide, physostigma, belladonna, and chloral stand high among the useful antispasmodics for tetanus. The actual benefit derived from them is but slight. They serve to palliate the discomfort by lessening the force of the contractions and by lowering the sensibility. These drugs should not be given with the expectation of actually curing the contractions. They might be entirely omitted without altering the results in most cases, but since the practitioner finds it necessary to administer something in the form of an internal medicine and since they may do some good, the internal medication with narcotics in small sensible doses should not be neglected.

Tetanic contractions can be entirely relaxed with chloroform inhalations, but they return with renewed force as the anæsthet-

ic state subsides. Carbolic acid administered internally or subcutaneously has a remarkable influence on the tetanic spasm, which effect has placed many cures to its credit. The effect noted in a number of cases of sub-acute tetanus, is that of reducing the force of the contractions and of prolonging the intervals between the paroxysms. The permanent benefit derived from the hypodermic administration of the drug does not, however, counterbalance the harm done by inflicting pain and provoking spasms, through pricking the skin at such frequent intervals. If carbolic acid is selected as the antispasmodic remedy it should be given per os.

From time to time new medicines have been lauded as having a more or less specific action on the tetanic contraction, but thus far none have proven sufficiently potent to gain permanent recognition as such. The cure of tetanus depends more upon the severity of the disease than upon any form of treatment known to the therapists of the day, yet by combining all of the possibilities together, many of the apparently hopeless, subacute cases in domestic animals can be guided safely to convalescence. The acute cases all die and the chronic ones will recover without much interference.

* * *

A NEW METHOD OF RESUSCITATING APPARENTLY DEAD ANÆSTHETIZED SUBJECTS.

The New York *Medical Journal*, September, 1905, reports the following phenomenal resuscitation of a man from death by chloroform syncope. The subject—a man who had sustained a serious thoracic wound, exposing the lung—collapsed from syncope twenty minutes after the chloroform had been stopped. After artificial respiration proved ineffectual, and some two minutes after the heart had stopped, the surgeon introduced the hand into the wound and massaged the patient's heart. Forty to sixty seconds later it began to beat. The operation was then completed and the recovery followed without further trouble.

A similar case is reported in the August *Lancet*, 1905. This subject was a woman submitting to an operation for laryngeal carcinoma. The heart stopped before the operation had begun. Tracheotomy and artificial respiration proving ineffectual, the surgeon hurriedly performed laparotomy and massaged the heart through the diaphragm. After fifteen to thirty seconds the heart began to beat and the patient lived for fourteen hours. In this case the heart was stopped at least ten minutes. If the mas-

sage had been begun earlier and if the patient had been in better general health it is evident that death would not have supervened.

These two cases are not without interest to the veterinarian. Deaths from anæsthesia always place the surgeon in a mighty uncomfortable situation. There is probably no accident or event occurring in a surgeon's practice that is more appalling, and since the cases are such that death is inevitable the veterinarian would be justified in resorting to this radical measure. In the large animals a laparotomy along the costal margin on the left side would admit the hand to the region of the heart, and the massage could be carried on through the diaphragm as was done in the above case.

DR. CHARLES E. COTTON, Minneapolis, Minn., has occupied his splendid new hospital on Fourth Avenue South.

A NEW VETERINARY COLLEGE.—We have received the announcement of the opening of the St. Joseph Veterinary College, Southwest corner Missouri and King Hill Avenues, South St. Joseph, Mo., which occurred the first of October. It is chartered under the laws of Missouri, and the course extends over three sessions of six months each. C. E. Steel, D. V. S., is dean of the faculty, and professor of theory and practice of veterinary medicine; A. J. Farley, A. B., B. S., D. V. S., professor of anatomy; J. E. Blackwell, assistant professor of anatomy; J. Hanson, V. S., M. D., professor of physiology; E. C. Carle, D. V. M., professor of materia medica and therapeutics; F. H. Ladd, M. D., professor of chemistry; A. R. Timerman, M. D., professor of general pathology; H. Marshall, V. M. D., professor of histology and microscopic methods; O. W. Everly, D. V. S., professor of bacteriology and meat and milk inspection; H. V. Goode, D. V. S., professor of veterinary surgery, dental surgery, and ophthalmology; W. E. Weihe, D. V. M., professor of obstetrics, hygiene, and zoötechnics; L. R. Baker, V. S., professor of shoeing and lameness; W. C. Bender, Ph. G., professor of pharmacology; C. W. Meyer (attorney at law), lecturer on veterinary jurisprudence; J. H. Lomax, demonstrator of anatomy. The requirements for admission are: "Every student must furnish satisfactory evidence of a good common school education, previous to his admission, or he may pass an examination in those branches ordinarily taught in the common schools." The new school opened with an enrollment of 35 students.

EXTRACTS FROM EXCHANGES.

ENGLISH REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

THE TRANSMISSIBILITY OF TUBERCULOSIS OF THE MONKEY TO THE OX AND GOAT, WITH OBSERVATIONS REGARDING THE REACTIONS OF THE EXPERIMENTALLY INFECTED ANIMALS TO TUBERCULIN [*A. E. Mettam, B. S., M. R. C. V. S.*]. —After relating a series of experiments which he has made on guinea-pigs, bulls and goats with tuberculous products obtained at the post-mortem of a monkey, the author presented the following conclusions: Tuberculosis of the monkey can be transmitted to the ox and to the goat; tuberculin if given in doses above the ordinary reveals tuberculosis, even if the animal has already within a short period of time received the usual dose as a test. Tuberculin does give a certain degree of immunity to tuberculin, but this immunity may be overcome by giving massive doses. An animal which has received a massive dose of tuberculin will not react to an ordinary dose of tuberculin, though known to be tubercular and capable of responding to tuberculin. In those cases where there is reason to suspect the prior use of tuberculin it is justifiable to use an increased dose at the time of testing. This increased dose will do no harm. An immunity to tuberculin may have disappeared after a lapse of ten or fourteen days and an ordinary dose of tuberculin will then cause a reaction in a tubercular animal though it has been tested previously. The reaction is most likely to be pronounced if a massive dose is given. A small dose of tuberculin will give a reaction, but the reaction will probably be delayed.—*(Journ. of Comp. Pathol., June, 1905.)*

CANCER OF THE HORN-CORE OF CATTLE [*K. Hewlett, M. R. C. V. S.*].—This disease, known as "horn-core disease of cattle," or "cancer of the horn-core," is quite frequently met in the City of Bombay Presidency. The author has observed twelve cases of it during the last two years. The disease takes its name from the fact that the horn-core is the most prominent part affected. All breeds of cattle are subject to it—a blow is very often the starting cause. The left horn is most commonly affected, although sometimes both organs are diseased. At first

there is a drooping of the horn; this increases until it hangs down and becomes loose. There is greyish, thick, fœtid discharge. The horn gets soft. After amputation the frontal sinus is seen filled with new growth. When this is removed it soon reappears, assuming the cauliflower appearance. The disease does not seem to cause much pain to the animal; as a rule, there is no constitutional disturbance; however, if the growth is left to develop the animal soon loses its condition and wastes away. Microscopical examination made on the cuts taken from six of the cases the author has observed, revealed the nature of the growth, viz., epithelioma. It is supposed that the disease begins in the mucous membrane of the sinus and from there invades the horn-core and gives rise to osteitis of the surrounding structures.—(*Journ. of Comp. Pathol., June, 1905.*) [From the illustrations given by the author, and comparison with others which we have seen, we are justified in the belief that the same affection is also found in the United States.—A. L.]

A Curiously Symmetrical Fracture of Each Humerus in a Dog [*Percival Smith, M. R. C. V. S.*].—A four or five-year-old spaniel having sustained a severe injury, could not walk, was unable to rise and when made to do so staggered about. A fracture of both arms was diagnosed after examination, and as the animal was in great pain, the owner had him destroyed. At the examination of the bones it was found that in both the outer tuberosity and articular surface of the lower extremity of each humerus were separated from the balance of the bone. The upper extremity, the body, and the inner tuberosity and articular surface of the lower extremity of each humerus forming one piece, isolated from the other small fragments.—(*Veterinary Journal, July, 1905.*)

An Extraordinarily High Temperature [*Fletcher Prime, M. R. C. V. S.*].—Early in 1902,on a voyage with 820 horses from Fiume to the Cape, the author was called one evening (when about 4° north of the equator and the whole ship was like an oven) to a Russian cob standing on the lower deck near the engine room. The animal was standing with all four legs astride; there being great difficulty of breathing and the pulse almost imperceptible. On taking the animal's temperature the mercury went up to the top of the thermometer past 110° F. Another test with another thermometer gave the same result. Death occurred five minutes later.—(*Veterin. Journal, July, 1905.*)

Abnormal Development of the Horse's Mandible

[*R. G. Linton*].—A lower maxillary observed by the author has presented interesting peculiarities, when compared with a normal bone of an animal of the same age and size. On the outer surface, the general attachment of the masseter muscle is not remarkable, but the postero-inferior border of the bone is very peculiar. The general outline is broken and the convexity of the border is replaced by a wide notch, which above ends at the point about where the straight line below the condyle ends, and below presents a large tuberosity, the maxillary tuberosity. On the inner side of the plates of the maxillary there is a large, rough surface. One of the most remarkable features of this bone is the increase of the angle formed by the ramus and the body of the bone. While in the normal mandible the angle is about 130°, in the abnormal specimen this measures 135°. The increase of the angle was not associated with any unusual relation between the length of body and length of the ramus. In a normal mandible the distance between the most anterior end and its condyle, the total length of the mandible being taken as 100, it was 64–65; and in the abnormal bone 64. It seems that this peculiar condition existed only on the left half of the whole maxillary.—*(Veterinary Journal, July, 1905.)*

RUPTURED LUNG IN THE HORSE.—In the *Record*, two cases of such lesion are recorded: The first (by W. E. Schofield) was found at the post-mortem of a horse that had died during the night, without any evidence of the slightest struggle having taken place. In opening the thorax, it was found full of blood, and when the lungs were removed, the left lung was found ruptured on its inner face for almost its entire length, having a gap between both extremities of the rupture, which measured 20 inches in length. There were no other lesions. . . . The second case is recorded by J. McRae Frost, M. R. C.V. S. There is little history about it. One morning blood was noticed in the horse's stall. When seen by the author he is in a prostrate condition, with cold extremities, weak pulse, temperature 102. Nothing definite is detected at auscultation. Caffein and digitaline are prescribed. In the afternoon the animal grows worse, and, notwithstanding treatment, he dies during the night. On opening the thorax, the cavity is found a third full of blood. On removing the lungs, lesions of old pleurisy are observed and the apex of the right lung is surrounded by a dark clot of blood and on washing this away the pleura is seen ruptured on the inner surface, with the lung tissue for an area, about the size and shape of the palm of the hand, presented an appearance

strongly resembling a sponge stained with blood. The lung was easily torn and the bronchia, as well as the trachea, were filled with blood.—(*Veterin. Record, July 8-15, 1905.*)

A SIMPLE APPARATUS FOR ANÆSTHETISING CATS AND DOGS [*H. Gray, M. R. C. V. S.*].—This has been used by the author during the last twenty years, and after having tried from time to time the various inhalers placed on the market, he has discarded them all for this plain and very efficacious domestic article, which is within the reach of every one. The appliance consists in a 2 or 3 pound glass jam-pot, having a large opening but a slightly contracted neck. Sometimes he uses instead a 2 or 3 pound "Cerebos" salt tin canister, which has a blunt free edge in consequence of the rim being slightly turned in and flattened. The advantage of this latter over the former has much to commend it. It is lighter and unbreakable. Both apparatuses are easily sterilized. Into the bottom of this a clean piece of cotton wool is placed, having two drachms of chloroform sprinkled over it. This is then held over the muzzle, or rather the muzzle of the animal is pushed into the lumen of the pot, which is held by the right hand, while the left hand seizes and holds the animal by the scuff of the neck, the legs being held by an assistant, who takes the two fore arms in his left and the two hind ones in his right hand, the animal lying on his side. Of course the apparatus is held so that the ingress of air is regulated according to requirements.—(*Veterinary Record, Aug. 19, 1905.*)

FRENCH REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

DIFFUSE ACTINOMYCOSIS OF THE FACE [*Prof. G. Moussu*].—At one of his clinical lectures the Professor presented the head of an adult cow, which in her condition could no longer be kept for milking purposes. The head presented a peculiar aspect, due to a thickening of the lower part of the head, thickening which gradually increased from the top of the head down to the lips, where it was very large, giving to that part of the body the true aspect of the head of an hippopotamus. The deformity did not extend upwards beyond the limits of the face, which then was wider than the cranial region, and then extended to the cheeks and subglossal region. The profile view of

the head was not deformed in the front and face, but the cheeks were enormous, the lips very thick, the commissures thick and indurated. The skin was tense, hard, inelastic, not œdematous except in the intermaxillary space. There were no fissures, no lesions of continuity. This condition has developed slowly and taken months to reach this aspect. The mucous membrane of the cheek is like the skin involved in the diseased process. At first the case was supposed to be one of sclerodermy, localized in the face; or, again, one of elephantiasis. Finally with the lesions before him the characters of actinomycosis were so evident that the help of the microscope was not necessary. The tongue was entirely intact and the cheeks and lips the only parts affected. It is regrettable that no specific treatment had been used, as it might have saved the cow.—(*Rec. de. Med. Vet., Aug. 15, 1905.*)

Rheumatismal Lameness and Treatment which Seems to Have Cured It [*A. Videlier*].—This is the history of an army horse which in the space of three years and a half has been disabled thirteen times with lameness, which was considered of rheumatoid origin (lesions of tendons and articulations, lameness of the fore legs, of the shoulder), which on the last occasion moved from one leg to the other in one night, being relieved from the lameness of the right, to be affected on the left fore leg by the next day. For this last time the treatment consisted in frictions made over the shoulder with a liniment made of formic acid 2 grammes, alcohol 30, water 50. The frictions were renewed for five days in succession. It is a year since he was discharged and returned to work.—(*Rec. de Med. Vet., Aug. 15, 1905.*)

The Dressing of Wounds with Ambryl [*Prof. Coquot*].—This is a mixture of wax and rosin, solid when cold, liquid when warm, which allows it to be thrown on the surface of wounds, making an aseptic cover, soft and perfectly isolating, and which acts first by its initial thermality and afterwards by the adhesion and elastic compression it exercises. It is applied by a peculiar apparatus, with which it is heated and easily applied on wounds, on old wounds, infected and suppurating, those of the withers, when there is extensive undermining, and in synovial wounds it has excellent results. With recent wounds, not suppurating or consecutive to operations, there is no suppuration, and cicatrization takes place rapidly. During operations it acts as a strong and instantaneous hæmostatic, specially if heated to 100°–125°C. It protects a wound also from any infection, as

proved by several operations, even when infected substances are in contact with the layer of ambryl that covers the wound. The author claims in favor of this dressing: Hæmostasis, facility and rapidity in the application of the dressing, possibility to use material and bandages not sterilized, absence of suppuration and active leucocytosis, acceleration and regularity in the cicatrization.—*(Bullet. Soc. Cent. de Med. Vet., Aug. 30, 1905.)*

TWO CASES OF DYSTOKIA IN THE SLUT, BY DEVELOPMENT OF A FŒTUS IN THE TWO HORNS OF THE UTERUS [*J. Cuille*].—When there is but one fœtus in the matrix it generally occupies only one of the horns. The author has observed two cases where the development took place in the two horns. In one, observed after death, when at post-mortem the position was found, the left horn contained the posterior part of the body and the right horn the head, neck and fore legs. One front leg was already engaged in the body of the uterus and that only could have been felt during exploration. In the other case, the fore leg was detected in the vagina and by pulling on it the fœtus was extracted. During the extraction the neck was much elongated, and bent back over the walls of the chest. The head came, and at the same time the croup. It is probable that the development of this fœtus was also in the two horns and that its elongated form allowed its extraction by force.—*(Revue Veterin., Aug. 1, 1905.)*

TUMOR OF THE BLADDER IN A DOG—CONSECUTIVE HYDRONEPHROSIS.—[*MM. F. Suffran and A. Daille*].—Hunting dog, five years old, has been losing flesh for a short time; coat is dull and rough; hairs standing, eyes sunken, general functions normal; tuberculosis suspected; negative results by tuberculin. When the animal is left out of his kennel, it stretches down to urinate, makes violent efforts and only expels a small quantity of urine, reddish, drop by drop, or again in a fine stream. Examination:—Catheter enters well into the bladder. Rectal exploration reveals normal condition of the bladder. In feeling the abdomen, the bladder is found enormously distended, about the size of a child's head and filling almost entirely the abdominal cavity. There is albumin and hæmaturia. Under the microscope it shows numerous red globules, leucocytes, various microbes, a few vesical cells, no renal cells, no renal tubes. Diagnosis:—Probably a tumor of the bladder. Post-mortem revealed double hydronephrosis. The right kidney as big as two fists, the left smaller. Ureters largely dilated, funnel-like in shape. Bladder enormously distended, contains dark, hæmorrhagic urine, with

detritus. The primitive essential lesion is a tumor situated on the supero-lateral walls of the bladder, quite near the neck of the organ and formed of polypous masses, a kind of cauliflower; it is soft, friable, easily torn, ulcerated here and there and closes almost entirely the openings of the ureters, and hanging partly over the urethral opening which it closes as a valve, and yet allowing the entrance of a catheter. The histological examination of the tumor classified it as a fascicular fuso-cellular sarcoma.—*(Revue Veter., Sept. 1, 1905.)*

DIAPHRAGMATIC HERNIA IN A MARE [*G. Parent*].—Record of a post-mortem made on an animal that died suddenly on a racetrack as it was about winning the race: A laceration—20 centim. in length—was found on the diaphragm, with part of the stomach and large colon in the thoracic cavity. In the middle of the diaphragm above the right pillar there is another laceration, running horizontally, and measuring 15 centimetres in length.—*(Revue Veter., Sept. 1, 1905.)*

PUNCTUATING WOUND OF THE CEREBRAL VENTRICLE—TOLERATION OF THE BRAIN [*MM. Bissauge and Naudin*].—The brain, which is in most cases so easily disturbed by the slightest cause, can sometimes tolerate extensive lesions for a long time. A small dog of common breed, aged 8 years, was suddenly taken with a violent attack of epilepsy, which lasted about 15 minutes. After the acute manifestations there remains symptoms which leave no room for hopeful recovery and the animal is destroyed. On exposing, at post-mortem, the cranial box, a small blackish spot is observed, which does not disappear by scraping of the bone; it runs through its thickness and is traced on the internal face of the parietal bone. The dura mater is the seat of chronic inflammation. The surface of the brain is smooth, the circumvolutions almost entirely gone. The hemispheres are fluctuating, and on the right side a small brown spot is observed, corresponding exactly to that of the parietal bone and meninges. The hemispheres accidentally cut, give escape to about 50 grammes of liquid. When this is out the cerebral tissue drops down. The middle and lateral ventricles are freely communicating. The ventricular walls are very thin, no thicker than a sheet of paper. Evidently there has been an old lesion with a sharp body, which has run through the bone, perforated the right ventricle and leaving a slight osteitis of the parietal, a localized pachymeningitis and encephalitis, with exudative inflammation of the inner face of the right ventricle. This lesion must have occurred several months previous and presented a

certain extent without giving rise to sensible manifestion.—*(Rev. Générale, Aug. and Sept., 1905.)*

SALIVARY CALCULUS IN STENO'S DUCT [*D. Moreau*].—A calculus, existing for two years, had grown rapidly lately and had to be removed. An incision upon it allowed its dislodgment. It measured 75 millimetres in length, 116 in circumference, and weighed 77 grammes. The wound healed without leaving a fistula.—*(Rev. Gen., Aug. and Sept., 1905.)*

SOME RARE CLINICAL CASES [*P. Leblanc*].—*Complete Abdominal Cryptorchidy in a Cat.*—At 18 months the testicles had not made their appearance. The owner waits a few months longer and finally wants the cat operated upon. It was done by opening the left flank, first for removing the left testicle, the right being taken off after opening the right flank. Cicatrization by first intention. [Why not operate through the median line?—EDITOR]. *Lateral Inguinal Cryptorchidy in the Dog.*—Aged 18 months, a dog is about to be castrated. Placed in position, only the left testicle is present; it is removed. During the operation, the right inguinal is raised now and then by a round body. This is cut upon and it proves to be the atrophied right testicle, which was held in the inguinal canal. *Ankyloblepharon in a Dog.*—This condition was observed in a five-weeks'-old pup, otherwise in perfect condition and well developed. He was operated on by an incision through the groove of union of the two eyelids easily noticed. Both eyes were treated in the same way, with no special cares afterwards. *Double Symblepharon in a Cat.*—A five-year-old cat has an entropion of both upper eyelids and adhesion of the palpebral and ocular conjunctivæ. The indications were to divide the adhesion, which prevents the elevation of the upper eyelid and then operation of the entropion to prevent the formation of a new adhesion. The operations were performed and three weeks later recovery was complete.—*(Journ. de Zoötechnie, August 31, 1905.)*

DUTCH REVIEW.

By L. VAN ES, M. D., V. S., Agricultural College, Fargo, N. D.

OBTURATION OF THE BRACHIAL ARTERY IN THE HORSE.—Schimmel and Reeser describe a case which was exhibited at the surgical clinic of the Government Veterinary School of Utrecht. The owner of the animal stated that the mare, which went sound when taken from the stable, showed lameness of the

right fore leg after some exercise. After a few moments' rest the lameness disappeared. While at pasture, no lameness could be observed, but when the animal was used on the plow the impediment in locomotion soon became so severe that the mare threatened to fall. This condition had lasted for six months. For the purpose of examination the animal was ridden under the saddle. At first it appeared perfectly sound and showed considerable spirit. After 7 to 8 minutes something abnormal in the gait became noticeable. The elevation of the right carpus became less; higher up, however, the leg was brought forward quite well and the shoulder was not held back. While trotting, the reduced flexion of the carpus and the dropping on the sound leg became more and more apparent. After some twelve minutes the animal seemed to be losing the control of its flexors. From the carpus downward the leg was swung forward with a marked hyper-extension of the phalangeal articulations. Like in chronic founder, the toe of the shoe could be plainly seen when the animal came toward the observer. If the trotting was continued the animal became so lame that it seemed to be falling. Upon examination, the mare seemed to be suffering quite severely, perspired over the whole body (the lame leg also), the nostrils were dilated, the eyes slightly protruding. Forward movements of the lame leg were accompanied by powerful contractions of the anconeus group of muscles and by a similar hyper-extension as was observed while trotting. The limb was put down with a trembling, uncertain and feeling motion, which apparently was very painful. The limb was repeatedly drawn upward without receiving the body weight; when this was done the opposite leg soon assumed this function. Everything pointed that the same painful pin pricks were being experienced by the animal which are present in similar conditions in man. When the animal was allowed a few minutes' rest, the normal gait returned, but when trotted the same symptoms promptly appeared. As to diagnosis, the presence of an obstruction in the brachial artery could not be doubted. It was not probable that the obstruction was higher up, as the shoulder muscles were apparently well supplied with blood. The cause of the obstruction could not be ascertained. Upon the unfavorable prognosis, the animal was disposed of by the owner.—*(Tydschrift voor Veeartsenykunde, May, 1905.)*

DR. JOHN E. SPINDLER, V. M. D., of Pittsburgh, Pa., has recovered from a five weeks' siege of typhoid fever.

THE VETERINARY PROFESSION IN AUSTRALIA.*

By W. T. KENDALL, M. R. C. V. S., Principal of the Melbourne Veterinary College.

[The career of a veterinary surgeon is one likely to particularly commend itself to young Australians. It will interest many to hear that it is proposed that the precedent established by the affiliation of the Edinburgh Veterinary College with the University of Liverpool should be followed in Australia. The Victorian Government has at present under consideration a scheme for taking over the Melbourne Veterinary College, and having it affiliated with the University of Melbourne, and so provide a University course in this profession. Mr. W. T. Kendall, M. R.C.V S., in the following article, deals lucidly with the advantages and difficulties of the career.—Editor *Life*.]

The demand for well trained veterinarians is continually increasing, and no profession offers a more suitable field for young Australians, who are notoriously fond of animals and an outdoor occupation, possessing as it does all the scientific interest pertaining to human medicine and surgery and requiring equally highly trained perceptive faculties and manual skill.

While most other professions complain of being overcrowded, the veterinary profession is yet in its infancy in this country. In Victoria there are not more than about eighty veterinary surgeons, half of whom have had no special training, while in the adjoining States the number is still smaller.

It is only within recent years that the intimate relationship between animal and human diseases has been thoroughly recognized, that many of them are intercommunicable, and that a proper knowledge and application of veterinary science are of the greatest importance to public health.

ANIMAL DISEASES INCREASING.

The higher state of domestication into which animals are being brought owing to the great development of the dairying industry, and the general advancement of agriculture and stock breeding, have led to an enormous increase in the number and prevalence of animal diseases, as may be noticed by the paragraphs continually appearing in the daily press, and there is a general outcry amongst stock-owners for more veterinary aid.

Several diseases, baffling in their character, indigenous to the country, resulting either from inseparable natural conditions or climatic influence, call for special and particular investiga-

* From *Life*, Melbourne, Australia, Sept 15, 1905.

tion, to determine the causes, and, if possible, discover the remedial and preventive measures to be adopted. In this matter, the experience of other countries counts for nothing. Original and scientific research can alone accomplish anything. To follow this up successfully, something wider in its aims than a private institution is desirable. Were a public institution subsidized by the Government, or, say, endowed by wealthy stock-owners, much might be done in this direction. A private institution is not necessarily more than self-supporting. Where a public institution is made the theatre of operations, all surplus funds may be devoted to the furtherance of the object in view, to additions and equipment for investigation work and experiment.

The various Commonwealth and State Departments requiring a veterinary staff are either manned by laymen, undermanned, or not manned at all. In Victoria, with the exception of the Department of Public Health, which only possesses one veterinary officer, and the Defence Department, which has one retained principal veterinary officer and six subordinates on a militia footing, there are no veterinary surgeons employed in the public service.

In many large provincial towns and in the majority of country districts, the stock owners are without veterinary aid. Thousands of valuable animals die annually from preventable or curable diseases, causing incalculable loss to the Commonwealth.

SCOPE OF VETERINARY WORK.

The days are gone past when the principal duties of a veterinary surgeon consisted of bleeding, blistering and physicking horses or helping a cow to calve. He now takes an important part in the prevention and suppression of animal diseases, and so contributes largely to the preservation of human health, and in order to do this he must study the laws which govern the origin and spread of disease.

The veterinarian, therefore, takes a leading part in bacteriology and in investigating the causes of diseases, cultivation of vaccines, anti-toxins and therapeutic sera for the prevention or treatment of human and animal diseases. The profession thus opens up a wide field for work.

OPPORTUNITIES FOR VETERINARY SURGEONS.

The stock branch of the Agricultural Department, which the present Director, Dr. Cherry, proposes to reorganize, should offer openings for two classes of veterinary surgeons, viz., those pos-

sessing a good practical knowledge of the causation of the diseases in stock and able to readily diagnose them during life, and form a sound judgment on the post-mortem appearances of diseased organs and tissues, and one or two highly trained bacteriologists and pathologists; the former to do the outdoor or field investigations, and the latter to attend to the laboratory work. Similarly those possessing special adaptability and training should be selected as inspectors of dairy herds and of meat, both for home consumption and for export.

A large number of stock inspectors, most of whom are laymen, are engaged in the different Commonwealth States. These positions will be taken by trained veterinarians when a sufficient number of qualified men are available. Already, inquiries are being made for good men in the adjoining States, and several important positions are now held by graduates of the Melbourne Veterinary College. The Government Veterinarian of South Australia, the Directors of the Sydney and Perth Zoölogical Gardens, one Government Veterinary Inspector, and the lecturer to the Agricultural College are all graduates of the institution.

In Victoria, several important positions are held in the Commonwealth military forces by locally-trained men, while others occupy official positions in connection with racing and hunt clubs, agricultural societies, etc.

All countries that have any claim to be regarded as advanced, employ a large number of veterinarians to conserve the health of their live stock. In New Zealand, which is far ahead of any of the Australian States, no less than thirty qualified veterinary surgeons are employed by the Government in inspecting live stock and meat for export and home consumption, with the result that the extra price obtained from the consumer more than pays the cost of the whole service.

Private practice also offers a certain amount of scope for specialization. One who prefers equine practice and operative surgery will necessarily confine himself largely to hospital and city work. The canine specialist will also require to locate himself in one of the larger cities, while the veterinary surgeon who prefers mixed or cattle practice, will find his field in one of the many extensive farming or dairying districts, and, if he so desires, he can combine farming with his profession.

Another field for specialization is the study of parasitic diseases of animals, which account for a large percentage of the mortality amongst our flocks and herds.

PREPARATION FOR THE PROFESSION.

The course of instruction for students intending to qualify for the profession extends over a period of four years, and, the curriculum being very similar to that of the medical schools, a good education is required. When the proposed affiliation of the College with the University of Melbourne is accomplished, students will require to matriculate before entry.

In addition to this, it is advisable for the student to obtain as much practical experience amongst all classes of farm stock as possible. This can only be obtained on a farm or at an agricultural college, and I know of no better preparation than a year or two at one of the latter. More than a fourth of the successful graduates at the Melbourne Veterinary College had previously graduated at one or other of the Agricultural Colleges, and shown special aptitude in the handling of live stock.

If he has had this previous training he already knows how to approach an animal with confidence, and is more easily trained to observe symptoms and secure the patients for examination or operation.

It is not advisable that he should enter college before he is seventeen or eighteen years of age, for, although he might pass the required examinations, he cannot obtain his diploma until he is twenty-one.

It is quite a mistake for parents to think that because a boy is fond of riding on horseback he will necessarily make a good veterinary surgeon. He must not only be fond of animals and in sympathy with their ailments and troubles, but he must be a careful observer and be able to draw correct conclusions from his observations. The symptoms he will have to interpret in diagnosing the diseases of animals are all objective ones. The patient can give him no verbal information, and such as he can obtain from the owner or attendant is often misleading, consequently he has to depend upon his own perceptive faculties and the knowledge he gains by experience.

The medical practitioner is occupied in dealing with the diseases of the human species only. The veterinarian has to make himself acquainted with the diseases of several, and it is necessary that he should be thoroughly conversant with the habits and ways in both health and disease.

PROFESSIONAL COURSE.

Each candidate for the diploma authorized by the Veterinary Surgeons' Act of Victoria must, during his academical course,

be subjected to and pass four examinations in the following order: The first examination at the end of the first sessional year, the subjects being elementary anatomy, practical chemistry, elementary physics, biology (botany and zoölogy). Second examination at the end of the second year: anatomy of the domesticated animals, physiology, histology, veterinary hygiene, sanitary science, dietetics, and stable management. The third examination at the end of the third year: morbid anatomy, pathology and bacteriology, materia medica; therapeutics and toxicology, and the principles and practice of shoeing. The fourth and final examination, provided the student has passed all the others, is held at the end of the fourth year, the subjects being the principles and practice of veterinary medicine, principles and practice of veterinary surgery, the examination of horses and cattle as to health and soundness, and meat inspection.

The cost of the College course is twenty-five guineas per annum. In addition, there will be a small amount required for text-books, dissecting instruments, microscopic apparatus, etc. The students are all externs, so that board and lodging must also be reckoned upon.

The large amount of national wealth involved in the live stock industry, the increasing prevalence of animal diseases, and the immense annual losses sustained from preventable causes, together with the increasing value of individual animals, assure a wide field of usefulness for well-trained veterinary surgeons.

DR. GEORGE MAGEE, of Uniontown, Pa., is a regular attendant at the monthly meetings of the Western Pennsylvania Veterinary Medical Association, and it is flourishing.

DAIRYING AS A PROFESSION.—Dr. G. V. Ellbrecht, Copenhagen, Denmark, who is soon to enter upon his duties as Government Dairy Inspector for Denmark, has enrolled as a graduate student in the Wisconsin College of Agriculture for the purpose of pursuing advanced studies along dairy lines. Mr. Ellbrecht has a grant from the Danish Government for three years' study of dairy proplems and conditions. He has spent a year and a half in Europe and will now spend a year in America, devoting most of his time at the University of Wisconsin. The position that Mr. Ellbrecht is to fill has been vacated by Mr. B. Boggild, the well-known writer and authority on Danish dairying who has recently been promoted to Professor of Dairying at the Royal Veterinary and Agricultural College of Copenhagen.—(*Breeder's Gazette.*)

CORRESPONDENCE.

NEBRASKA OMITTED FROM THE LIST OF STATES HAVING VETERINARY LAWS—HER LAW CRITICISED.

NEWMAN GROVE, NEBRASKA, NOV. 20, 1905.

Editors American Veterinary Review:

DEAR SIRS:—Kindly publish the following to get the views of the veterinary profession. I see by the November REVIEW a list of States with veterinary laws, with Nebraska omitted, which I consider a mistake in one sense and not in another. Viewed in its proper light, we had a law passed that went into effect July 1st. Drs. Peters, Ramacciotti and Anderson are the State Board appointed by the Governor. No more worthy and honorable men are in the State of Nebraska, who I am certain are worthy the highest honors the veterinary professiou can bestow. This law, I understand, was written by one of the best lawyers in the State, and, if so, in my estimation, his ability is not shown in the bill to any one who will read it as published, and the only good it does is to compel future graduates that locate in this State and those who are now in the State, to take the examination. I am positive a non-graduate stands no chance of passing if all examinations are as severe as their first. Now, if you will read the law carefully, you will find that a non-graduate cannot use the title conferred by any college (not the words exactly, but the meaning). Now, here is where I claim that great lawyer failed in his duty. He should have said, after a certain date, I claim, and, if the editor will look the matter up he will see, that if I or any other graduate located in the State of Nebraska or any other State who has had conferred upon him an honorable and legitimate title by an honorable college, recognized by the Federal or State governments, can pass no law that will deprive him of that title. It cannot hold in law, which the Board will find out if it attempts to prosecute any graduate who was in the State before such a law was passed. With a non-graduate it is different; the title does not belong to him, as he never earned it by education or any other honorable way, but just stole it, and by using it he is a fraud. You will notice it injures no one but a graduate, as he wants the title. Now, non-graduates can practice, as they always have, as "horse doctors"; there is no law here to prohibit any one from practicing, so long as he does not use the title conferred by a college. The title "horse doctor," or "stock doctor," is not used by a college

and the most of the farmers know all veterinarians as "horse doctors"; they come into the office, and ask for the "horse doctor," and you say "yes"; or, "are you the person who doctors cattle, cows or hogs?" You never hear them say, "are you the 'veterinary,' or the 'veterinary surgeon?'" In time they may be educated to use either of these terms, but not as long as Nebraska is loaded down with the class of farmers it now has. Their children may, as their education is superior. A law can be passed for future protection, as all States have that right, so the law to graduates or others that newly locate in the State would have to pass the State Board examination if they wished to use the title. The law does only one good, and that is to stop travelling quacks that journey into a town and advertise as the "great Doctor So-and-so, veterinary surgeon and dentist." It does not prohibit him from going from farm house to farm house, asking farmers if they wish their horses' teeth fixed, as long as they don't call themselves "veterinary dentists"; but just say "I fix horses' teeth and guarantee satisfaction or no pay;" that's all that is necessary. The law has not stopped one of them and never will. Nebraska will have to do better than that, if it wishes to benefit the profession, as this law does not benefit it in the least, and I cannot see why money was wasted in getting such a law passed. Respectfully,

H. THOMSON.

[The REVIEW makes its apologies to Nebraska, and will have the omission supplied in the next publication of the list.—R. R. B.]

DR. CONKEY DEFENDS THE GRAND RAPIDS VETERINARY COLLEGE.

GRAND RAPIDS, MICH., Nov. 24, 1905.

Editors American Veterinary Review:

DEAR SIRS:—Will you kindly allow me a word in reply to Dr. Reynolds, of Minnesota, whose article appears on page 911, Vol. XXIX., No. 8, of your excellent journal, to which I have been a subscriber for more than twenty years.

Dr. Reynolds presumes to pass judgment upon the Grand Rapids Veterinary College, and yet he has probably never set foot in our city, and by what right does he do so? Is this in accord with the professional ethics of the A. V. M. A.? The Doctor says that the Grand Rapids Veterinary College "has been universally condemned." His conception of the word "universally" must be very limited if he thinks that the veterinary

foreign element of Michigan, who belong to the A. V. M. A., constitute the professional universe.

Dr. Reynolds says "there is a bitter feeling among veterinarians in the State against the institution." We acknowledge some truth in this assertion, inasmuch as this foreign element is sucking the "tit of jealousy" and its lacteal fluid has always been of a bitter repugnant nature.

One of the members of this foreign element was, once upon a time, State Veterinarian of Michigan for four years, during which time he attempted to "call" the G. R. V. C. at a committee meeting of the Committee on State Affairs in our legislative hall, but was himself "called" and shown to be an alien, which disqualified him for the position he then held, and for which the old S. V. M. A. was at the time grooming him for reappointment. He has since taken out his naturalization papers and has continually been trying to get back at the college for showing him up in his true light.

Now, Mr. Editor, the Grand Rapids Veterinary College is doing business on the "square," and God knows it is bad enough for men living in Michigan to speak ill of us, but when men like Dr. Reynolds, of Minnesota, takes up the cudgel for our professional enemies, without first coming to us and investigating our work in a gentlemanly manner, and then for him to laud a short five-and-a-half months' two-session school, is going too far.

If the Doctor wishes to make a personal investigation we shall be glad to have him do so, and he can draw on the college through the Fifth National Bank of our city for his expenses, an offer which is extended to any official of the A. V. M. A., but we do hope that he or they will refrain from attacking us in the dark in an underhanded manner.

There is not one professional man or State official in Michigan who has ever set foot inside of our college, at 38 and 40 Louis Street, that speaks ill of us. We challenge Dr. Reynolds or any other man to disprove this statement.

Further, the college is conducted in as honorable and upright a manner as is any like institution on the American Continent, and we will stack books for inspection with any and all colleges from date of their organization, and will pit our alumni against that of any veterinary college on the Continent. Further, we will pay all expenses of such an investigation if we fall below second place.

Now, then, gentlemen, come and see us before you do any

more talking, as we believe ours the *best equipped*, largest and most commodious, most sanitary and best lighted veterinary college on the American Continent. If we are mistaken we shall deem it a favor if they will come and point out our error.

DR. L. L. CONKEY, *Principal.*

SIMPLE BUT EFFECTIVE OPERATION FOR "SAND-CRACK."

DENVER, COL., October 30, 1905.

Editors American Veterinary Review:

DEAR SIRS:—In looking over text-books you find the treatments for "sand-crack" too numerous to commit to memory, and still harder to put in practice, many of which are not at all practical. In order to be fully prepared to perform them all, one must have an express wagon to haul the appliances, many of which are imaginary.

The operation which I wish to call attention to is in my hands quite simple and easy to perform, by the aid of a twitch, side-line in case of the hind hoof, or stool in case of the fore, and a sharp knife.

Simply make an incision through the periople, and into the coronary band, about ⅜ to ½ inch deep and ½ to 1 inch long. The incision should be made at right angle to the hoof crack, so that if the crack was prolonged it would strike the middle of the incision.

The length and depth of the incision should be to suit the severity of the crack, etc. The wound should be dressed as an open wound. I find tannoform ung. very good—made with tannoform one drachm, petrolatum one ounce. Mix and apply daily.

A word may be said as to shoeing, which should always be a heel-and-sole pressure rubber-pad shoe, or a bar shoe. In case of quarter-crack, the shoe-bearing portion of the hoof, posterior to the crack, should be cut down so that there will be no weight on this quarter. The toe and opposite side of the hoof should be lowered so as to shift the weight on the sound portion.

In case of toe crack, the hoof should be leveled perfectly. The hoof for one inch on each side of the crack should be cut away, so that no weight will come on the toe for an inch on either side of the crack. The hoof should be as above, and shod with a heel-and-sole pressure rubber pad, with oakum and tar.

In case of severe lameness, rest for a few days, but in case

of no lameness the animal may work. Our text-books warn us against the cutting of the coronary band, and in so doing they scare the life out of the surgeon.

In my opinion and experience, you may cut the coronary band as much as you like, so long as you make your incision longitudinally. The escar made in this manner brings about a weld of the superior portion of the crack, which grows down, leaving a sound hoof wall, which is stronger than before. I have performed and seen performed by good surgeons many operations for "sand-crack," but this is the best, in my judgment.

MARK WHITE, V. M. D.

OBITUARY.

JOHN ARCHIBALD BELL, V. S.

Of cerebral meningitis, on Oct. 10, at his residence in Watertown, N. Y., Dr. John A. Bell died, after a short illness. The deceased was a well-known and valuable member of the profession of the Empire State, having been foremost in all movements looking toward the advancement of his profession. Dr. Bell was born at Sharpton, Canada, in 1857, and graduated from the Ontario Veterinary College in 1880, locating in Watertown soon after completing his education, where he always enjoyed a lucrative practice. He was a charter member of the New York State Veterinary Medical Society and had been one of the most regular attendants at its annual meetings, the writer having had a pleasant conversation with him at the last meeting at Ithaca in September. For many years he was a regular member of the American Veterinary Medical Association, but his name fails to appear in the list of 1893 and 1894. He was appointed as Inspector of the Bureau of Animal Industry, in 1890, in charge of the port of Cape Vincent, and held the position at the time of his death. He took an active interest in the affairs of his adopted city, and will be greatly missed in a business and social sense. He was a prominent member of the Order of Elks, holding the office of Esteemed Leading Knight at the time of his death. He was also a member of the Masonic Fraternity and of the Odd Fellows. He is survived by a widow and a daughter.

A TEAMSTER in Oakland, Cal., arrested for driving a lame horse, said his employer was trying to cure the horse by Christian Science, and had made him take off a poultice from the horse's leg.

ARMY VETERINARY DEPARTMENT.

THE Church Society for Promoting Kindness to Animals, an English organization of which Queen Alexandra is the first patron, is sending a deputation to America to enlist the coöperation of President Roosevelt in persuading the great powers to extend the terms of the Geneva Convention in the interest of animals. A circular issued by the society states that at the forthcoming Peace Conference at The Hague the revision of the Geneva Convention is almost certain to be taken under consideration, when the society, which has for years past been endeavoring to educate public opinion upon the subject, will urge the representatives of the great powers to make the words in the convention, "sick," "wounded," and "disabled," which now apply to men only, applicable to animals also. This done, those who after a battle tend wounded horses, will, if wearing the badge of the Red Cross, be protected equally with those who tend wounded men.—*(Army and Navy Journal.)*

R. T. WHITTLESEY, D. V. S., has been tendered and has accepted the chair of comparative anatomy at the Los Angeles (Cal.) College of Physicians and Surgeons. The *Western Veterinarian* congratulates the profession of California on the honor done the profession by the appointment of one of its members to a professorship in a medical college, as showing the change in the feeling of the members of the medical profession toward the veterinarian in the past few years.

A MAN DYING OF GLANDERS.—Dr. J. W. Robinson, Coal Harbor, North Dakota, sends the REVIEW an article extracted from the Minot (N. D.) *Optic*, of October 17, giving an account of the case of Orland D. Barlow, aged 40 years, who resides in Minot. While working a claim 18 miles north of Minot he accidentally scratched the palm of his hand and caused a suppurating wound. In hitching up his horse he placed the palm of his hand against the body of the horse [possibly over an open farcy-bud]. A few days later he was taken suddenly ill, and inside of a week his case was diagnosed by several local physicians as glanders. Dr. H. C. Belyea, of Williston, was then called, and he confirmed the opinions of the local physicians, and said there was absolutely no hope for the patient. The account says the State veterinarian was notified, but his decision in regard to the horse had not been received.

SOCIETY MEETINGS.

WAKE UP, SECRETARIES!

For a long time the REVIEW has been carrying in its table of "Veterinary Medical Association Meetings," the names of almost half a hundred of such organizations. Quite a large number of these fail to make any report of their deliberations for publication, although they have repeatedly been extended the courtesy of as many pages as they may require for that purpose. Many of them furnish full and delightfully interesting stories of what takes place at their meetings, to the infinite benefit and edification of their fellow veterinarians. Why not all? We would especially like to hear from the Central Canada Veterinary Association, Veterinary Association of Manitoba, North Carolina V. M. A., Western Pennsylvania V. M. A., Genesee Valley V. M. A., Colorado State V. M. A., Rhode Island V. M. A., South Dakota V. M. A., Kansas State V. M. A., Association Médécale Veterinaire Francaise "Laval," Province of Quebec V. M. A., Kentucky V. M. A., Washington State College V. M. A., Ohio Valley V. M. A., Louisiana State V. M. A., and Essex Co. (N. J.) V. M. A. If the Secretaries of any of the associations named above believe that they have permanently disbanded, we would be glad if they will notify the REVIEW, as it is our desire to make our records absolutely reliable and free from dead material.

IOWA-NEBRASKA VETERINARY MEDICAL ASSOCIATION.

This Association convened in the Assembly Rooms of the Water Commissioners, at 9.30 A. M., October 12, with Dr. Geo. P. Tucker in the chair. The first order of business was the roll-call. Next the reading of the minutes of the previous meeting, which were approved as read.

President Tucker then gave his address, which was brief, but to the point. The Doctor reviewed the present conditions of the veterinarians and spoke of the general prosperity. He mentioned that the colleges were well attended and that the en-

rollments were larger than in the best days before the panic of 1893. He also stated that the increase of State laws would bring about better conditions for the veterinarian and would help the colleges in securing students with better educations. He complimented our colleges for striving to make their curriculum more perfect each year. He advised veterinarians to become judges of live stock, so that they could intelligently speak on the value of the various breeds and types of domestic animals and be advisors in their community on such subjects. He was pleased to see such a large attendance and hoped the Iowa-Nebraska Veterinary Medical Association would grow to be one of the largest organizations of its kind in the West. He thanked the members for their attention and hoped that they would have a profitable and enjoyable meeting.

The Secretary-Treasurer was called upon to make his report. His report showed that it took a great deal of correspondence to keep an organization of this kind going. He reported that he would have a printed list of the books belonging to the University Medical Library and that these would be available to the members of this organization. He stated that subjects would be looked up for any member who requested the same. He hoped that the members would avail themselves of this opportunity and use the books belonging to this library. He also reported on the bulletin to be issued by the Iowa-Nebraska Veterinary Medical Association, and stated that this bulletin would make its appearance in the near future. The bulletin is not to be a technical bulletin, but is to contain short items of interest to the members in this section of the country. The report of the Secretary was discussed, and it was the unanimous consensus of opinion that a bulletin devoted to the interests of this Association would be of great benefit to its members.

The first paper on the programme was that by Dr. Earl F. Stewart, of North Bend, Neb., on "Radial Paralysis*." This brought out a great deal of discussion. Dr. Anderson said that he had seen a number of similar cases in his practice and was very much interested in the Doctor's paper and argument. He said that he had these cases occur soon after the animals had been cast for operation. After a liberal discussion it was found that these cases were more common than first thought and that their pathology was not clearly defined in our text-books.

On account of the absence of Drs. Bostrom and Leslie, Dr.

* Published elsewhere in this number of the REVIEW.

D. H. Miller, of Harlan, Iowa, gave a short talk on "Packing the Alveolar Cavity with Gutta-Percha." He said that it was especially indicated where there was a profuse discharge and where the tissue did not seem to heal and would become necrotic. He said that after plugging such cavities that they would heal quite rapidly. He stated that he heated over a lamp three sheets of the ordinary gutta-percha used in dental work and then made it into the shape necessary to fill out the entire cavity and that it would soon become solid. He said that he had used this method for the last three years with very gratifying success and stated that it could be applied with very little trouble. Dr. Schaefer stated that for a number of years he had used this same treatment in cases similar to those described by Dr. Miller. Dr. Anderson stated that he believed this should only be applied in rare instances, for he stated that sometimes where the cavity does not heal it might be due to cancerous conditions of the bone or tissue. He described a case that would not yield to treatment and which upon microscopical examination proved to be sarcomatous.

At the request of Dr. Stewart, Dr. Miller reported a peculiar case of a horse suffering from an ulcerated tongue, which proved to be cancerous. The Doctor stated that he removed a large portion of this organ and that the horse had to be fed with a stomach tube for 112 days. The horse was very much emaciated and could not stand up, but he said that at this time the horse seemed to be improving and that there was a possible chance for him to live.

Dr. C. A. McKim reported a horse having large pustules and ulcers on the tongue. At first he thought it was glanders and placed the horse in quarantine.

Dr. Simpson reported an interesting case of a mule that had an enlargement on the left side of the abdomen. The animal lost flesh very rapidly and became very poor and died. Post-mortem examination revealed a large sarcomatous tumor, weighing 150 pounds, which involved the stomach, liver, and intestines. Dr. Tucker was of the opinion that sarcomatous tumors were on the increase.

Dr. Vincent related an instance where a horse was found to have running sores and upon examination found that the entire roof of the mouth was very much enlarged by the growth and that all six of the molar teeth were loose and could be extracted with the hand. He pronounced the case incurable and the same died within two weeks.

Dr. Anderson spoke of the peculiar growths that are found around the eyes, teeth, and face. He stated that the bones were very soft and had very little resistance and that they were very vascular. He believes that these cases are more numerous and that they are on the increase.

Dr. Koto stated that when operations are resorted to, they should be sure to remove all of the affected tissue, otherwise they are sure to re-occur. He gave an instance where all of the tissue including the eye had been removed and the animal recovered. He also related his experience with spinal meningitis in cattle and stated that the bacteriological examination revealed the organism and that it was the same as that found in the human being.

The Association then adjourned to meet at Dr. Ramacciotti's Infirmary at 1.30 P. M.

The following operations were performed:

Tenotomy, Dr. L. A. Merillat.

Neurotomy, Dr. L. A. Merillat.

Removal of the third molar, Dr. J. S. Anderson.

Removal of a large sarcomatous growth on the eye, Dr. H. Jensen.

Removal of a bursa, Dr. L. A. Merillat.

Neurotomy for spavin, Dr. J. S. Anderson.

Castration of a cat, Dr. C. A. McKim.

The clinics were pronounced a success. They were indeed the most enjoyable feature of the entire meeting. Dr. Ramacciotti had some very good subjects and the operations were performed promptly.

In the evening the members of the Association attended the Horse Show in a body.

On account of the President being called home the Vice-President, C. E. Stewart, called the meeting to order on October 13, at 9.30 A. M. The first thing on the programme was the election of officers. Dr. D. H. Miller, of Harlan, Iowa, was nominated for President. It was moved and seconded that the rules be suspended and that Dr. Miller be elected by acclamation, which was carried. Dr. G. R. Young was nominated for Vice-President, and likewise the rules were suspended and he was elected by acclamation. Dr. A. T. Peters was again nominated for Secretary-Treasurer. He protested, assuring the members that it would be better for some one else to take this office. He was finally prevailed on to take this office.

The first paper on the programme was that of Dr. Kingery on

"Periodic Ophthalmia*." This paper provoked a lively discussion, which was participated in by Drs. Merillat, Schaefer, Miller, S. Stewart, Anderson, Jensen, and Young. After a long discussion it seemed to be the concensus of opinion that this disease needed careful investigation and that the present methods of treatment were not altogether satisfactory and that the practitioners should try and study its pathology and its infectiousness thoroughly in order to bring about some more rational way of preventing this disease. It seemed to be the opinion of all those discussing this disease that it was the duty of the veterinarians to discourage the use of animals afflicted with this disease for breeding purposes and that the veterinarians should inaugurate a campaign of education among their clients to that effect.

Dr. Gain was then called upon to give a talk on "Notes from County Fairs." The Doctor spoke of his experience in judging at county fairs. He found that 46 per cent. of the draft stallions and 65 per cent. of the mares that were four years old and over were unsound. The Doctor's talk seemed to be a great surprise to the veterinarians present. They had not realized that there were so many unsound sires and mares in the country and they felt that it was their duty to inform the breeders and stockmen of this fact and try to reduce this by giving them information that would prevent them from purchasing animals with such defects. This was discussed thoroughly by Drs. McLeod, Koto, and Anderson.

The Association adjourned to meet again at 1.30 P. M.

The meeting was called to order by Dr. Stewart, the Vice-President. The first number on the programme was his talk on "Veterinary Sanitation." He spoke of tuberculosis in swine constantly increasing and showed how this would affect the farmers and stockmen in the future if it was not checked. He stated that it was very prevalent in some dairy districts in his State and that the packers have spotted these districts and are very cautious in buying hogs that come from these districts. He also exhibited some very good photographs of a horse affected with maladie du coit. He also spoke on the outbreak that occurred in his State some time ago and the preventive measures used to keep this disease from spreading. He exhibited some eggs of the Texas fever tick which were taken from animals shipped into his State during the summer months and caused an outbreak of Texas fever there.

*Published elsewhere in this number of the REVIEW.

The Chair recognized Dr. Kingery, who with a few well-chosen words presented the Secretary with a loving cup as a gift from the members of the Association. The cup had been purchased by a committee consisting of Drs. Jensen, Miller, and Kingery. This was a total surprise to the Secretary. He appreciated very keenly the gift from the Association, whose Secretary he has been for a number of years.

The Vice-President next called on Dr. Merillat. The Doctor excused himself for not having a paper. He laid the blame on the Secretary for not having notified him soon enough that he was to have one. The Doctor commended the Association for taking up the work of stock judging, stating that it was a step in the right direction. Every veterinarian should become acquainted with this important work so that he can become a competent adviser in this branch of our profession. He also suggested that the veterinarians practice to become better diagnosticians, for he considered this one of the weak points of the veterinarian. He also suggested that wherever it was possible a post-mortem examination should be held to verify the diagnosis. He stated that where a pathological or bacteriological examination could not be made by the doctors themselves that it be sent to some school for examination. He suggested that the practitioner have proper restrainments for confining animals. He said it was not necessary to have a number of them, but that the operator should become thoroughly acquainted with whatever method was used, so that he could use it well. Whenever restrainment is used and the animal properly confined, it adds much to the operation. A surgeon should have at least one of the operating tables now in use and should have the necessary instruments at his command. He stated that this would give the practitioner a standing in his community. Dr. Merillat's remarks brought out a discussion, Drs. Schaefer, Jensen, S. Stewart, and Kingery taking part. This concluded the papers.

Upon motion of Dr. Jensen, which was seconded by Dr. Schaefer, Dr. L. A. Merillat was elected an honorary member to the Iowa-Nebraska Veterinary Medical Association.

The Chairman then called for reports of the committees. Dr. Baldwin, Chairman of the Auditing Committee, handed in his report, which was ordered placed on file. Next was the report of the Committee on Resolutions.

The following resolutions were adopted:

"*Resolved*, That we, the Iowa-Nebraska Veterinary Medical Association, hereby extend a vote of thanks to the Omaha

Water Board for the use of its rooms for holding our annual meeting.

"*Resolved*, That we, the Iowa-Nebraska Veterinary Medical Association, second and join with the Missouri Valley Veterinary Medical Association in inviting the American Veterinary Medical Association to hold its next annual meeting (1906) at Kansas City, Mo.

"*Resolved*, That we congratulate Dr. H. L. Ramacciotti on his courage in bearing the affliction which has befallen him in the loss of his foot and that we extend to him our fullest sympathy.

"*Resolved*, That we give Dr. H. L. Ramacciotti a hearty vote of thanks for providing a place and facilities for holding the most valuable clinical session in the history of this Association.

"WHEREAS, Professor Hoffman, of Stuttgart, Germany, has made a biased and misleading report on the veterinary colleges in the United States and on the skill of American veterinary surgeons;

"WHEREAS, The veterinary journals of Europe have given wide publication to the same; therefore, be it

"*Resolved*, That we, the members of the Iowa-Nebraska Veterinary Medical Association in convention assembled, regret the very discourteous and erroneous report of Professor Hoffman; also regret the wide publicity given to this report, founded as it is on very incomplete and biased observations; and be it further

"*Resolved*, That we appreciate Professor Liautard's prompt refutation of said statements in the AMERICAN VETERINARY REVIEW, October, 1905, and heartily endorse his statement that Professor Hoffman's remarks were 'absurd and untrustworthy'.

"*Resolved*, That we greatly appreciate the professional interest of Dr. L. A. Merillat in attending and contributing by surgical operations in the clinic and by a paper for the programme of our meeting, and extend him a vote of thanks.

"*Resolved*, That we, the Iowa-Nebraska Veterinary Medical Association, extend a vote of appreciation for the courtesy shown its members by the Omaha Horse Show Association.

"Hal C. Simpson,
"J. S. Anderson,
"H. E. Talbot."

The following were present at the meeting of the Iowa-Nebraska Veterinary Medical Association: F. E. Brazie, Harlan,

Ia.; D. H. Miller, Harlan, Ia.; R. R. Hammond, Cherokee, Ia.; C. E. Stewart, Chariton, Ia.; P. O. Koto, Forest City, Ia.; J. G. Parslow, Shenandoah, Ia.; Harry Crandall, Creighton, Neb.; John A. Berg, Pender, Neb.; I. W. McEachran, Geneva, Neb.; W. D. Hammond, Wayne, Neb.; V. Schaefer, Tekamah, Neb.; T. Knaak, Coleridge, Neb.; G. R. Young, Omaha, Neb.; S. H. Kingery, Creston, Ia.; George Springer, Hastings, Neb.; H. N. Hall, Roseland, Neb.; A. F. Baldwin, Creston, Ia.; H. T. Hahn, Falls City, Neb.; C. Goodwin, Waterloo, Neb.; C. C. Fouts, Chambers, Neb.; Jas. Vincent, Shenandoah, Ia.; R. A. Huntley, Pawnee City, Neb.; Otto Underberg, Madison, Neb.; W. H. Wellen, Elgin, Neb.; G. P. Statter, Sioux City, Ia.; J. S. Anderson, Seward, Neb.; Peter Simonson, Fremont, Neb.; W. E. von Nordheim, Harvard, Neb.; Earl F. Stewart, North Bend, Neb.; Hal C. Simpson, Denison, Ia.; W. W. Talbot, Oskaloosa, Ia.; J. H. McLeod, Charles City, Ia.; Geo. P. Tucker, Lincoln, Neb.; Will R. O'Neal, Lyons, Neb.; Chas. A. McKim, Lincoln, Neb.; M. V. Byers, Osceola, Neb., J. W. Haxby, Villisca, Ia.; J. L. Hoylman, Wilsonville, Neb.; H. Jensen, Weeping Water, Neb.; M. T. Bernard, Grand Island, Neb.; J. H. Gain, Lincoln, Neb.; John Konkright, Friend, Neb.; H. L. Ramacciotti, Omaha, Neb.; A. T. Peters, Lincoln, Neb.; C. M. Day, So. Omaha, Neb.; A. T. Everett, So. Omaha, Neb.; D. C. Scott, Omaha, Neb.

A. T. PETERS, *Secretary.*

CALIFORNIA STATE VETERINARY MEDICAL ASSOCIATION.

[*Abstracted from the "Western Veterinarian."*]

The regular quarterly meeting was held September 13, 1905, at the Agricultural Building of the State University, Berkeley, California.

Prior to the meeting the members spent an enjoyable half hour viewing an exhibit of pathological specimens and microscopic slides prepared by Drs. Ward and Haring.

The meeting was called to order by the President, Dr. R. A. Archibald, at 2 P. M.

Roll call showed the following members present: Drs. Whittlesey, Morrison, Summerfield, Shaw, Donnelly, Sorenson, Williams, Outhier, Hogarty, Jackson, Fox, Danielson, Somers, Faulkner, Haring, Spencer, Sr., Spencer, Jr., Keane, Dawdy, Gordon, Segsworth, Blemer, Creely, Browning, Ward, and Archibald. Honorary member; Mr. Fred J. Sinclair, business manager of the *Western Veterinarian.* Visitors: Drs. Eastman,

Diete and a number of students from the San Francisco Veterinary College.

The minutes of the previous meeting were read and approved.

The Board of Examiners reported favorably on the application for membership of Dr. C. B. Outhier. The report was duly accepted and filed.

The Clinic Committee, consisting of Drs. Donnelly, Jackson, and Hogarty stated that they had, as announced in the programme, arranged for a clinic to take place at the Oakland Veterinary Hospital at 7.30 P. M.

The Judiciary Committee, through its chairman, Dr. Archibald, reported progress and presented the July number of the *Western Veterinarian* as part of its report. Dr. Archibald also said that the committee had under consideration the advisability of the resignation of its present members, with a view of permitting other members of the Association to act on said committee and distinguishing themselves in the prosecution of illegal practitioners. With that end in view he called upon the members for volunteers to act upon the Judiciary Committee, with negative results, as no one present seemed desirous of obtaining the privilege of covering themselves with glory in that particular direction. In response to a query as to how such a great honor was conferred upon a member acting on the Judiciary Committee, the chairman stated that the member would most likely get his name in the daily newspapers occasionally. No volunteers for positions on the Judiciary Committee presenting themselves, the matter was dropped for the time being.

Under the head of reading of papers and discussions, Dr. Chas. H. Blemer was called upon to entertain the meeting, which he did by giving an interesting address upon "The Veterinarian and the Live Stock Press," Dr. Blemer being editor of the *Live Stock and Dairy Journal*; his address dealing with the subject from the viewpoint of an editor of a stock paper was well received and provoked a discussion which was participated in by every member present.

Dr. H. A. Spencer on being called upon to open the discussion responded by stating that he was not on the programme as an essayist, but that he had prepared a short article entitled "Am I Right?" which having a direct bearing upon the subject introduced by Dr. Blemer, he desired the privilege of reading at this time, it being in the nature of an argument in regard to the stand taken by Dr. Blemer. Permission being granted, Dr.

Spencer gave his views from the standpoint of a practitioner upon the subject matter of veterinarians answering queries and disseminating veterinary information through the columns of stock and dairy journals.

Dr. Whittlesey stated that he was not prepared with an address owing to the fact that his typewriter was not in working order.

Dr. Blemer in reply to some of the arguments advanced by Dr. Spencer stated that his paper was willing to reciprocate. If the members of the veterinary profession would give his publication the support they should give it he would be willing to discontinue the answering of veterinary queries and the dissemination of veterinary information amongst the laity.

Dr. Ward agreed with both Drs. Blemer and Spencer as he believed they were both right. In view of his position with the University it was necessary for him to answer queries regarding the treatment of sick animals. At the same time he felt ashamed every time he did so as the descriptions and symptoms of sick animals usually given were so vague that it was impossible to answer queries in an intelligent manner. As far as he was concerned it was hard enough to make a diagnosis in the presence of a sick animal, not to mention the description of such by a layman and usually not a very intelligent layman at that. In regard to instructing farmers concerning milk fever he thought it was his duty to give them all the information at his command. In fact his official position compelled him to do so. He recently had an experience in Haywoods, where he had been called to treat a cow with milk fever. The cow got well and now the farmer treats such cases himself.

Dr. Summerfield thought there were two sides to the question. He being a country practitioner was frequently consulted by farmers who lived a long distance from his office; too far for him to respond to calls to milk fever cases. He asked what was he to do? Let such people lose their stock or instruct them how to save them? He was in the habit of telling them how to treat such cases.

Dr. Keane thought it was unprofessional to withhold useful knowledge not only from the profession but from the laity.

Dr. Dawdy said, that were he a millionaire he would agree with Dr. Keane, but being dependent upon his veterinary knowledge for his livelihood he did not agree with him. Of course salaried veterinarians like Drs. Keane and Ward were required to disseminate useful knowledge. That was part of their official duty.

Dr. Spencer, Sr., did not think it was necessary for Dr. Summerfield to tell all the farmers in his community how to treat milk fever. Might have to do so in extreme cases which could be handled in a way that would work no injury. As it is now some farmers are using a bicycle pump for every disease cows become affected with. Knew of a case of obstetrics in which the owner gave air treatment and the cow died. Could not be convinced that it was right to put remedies in the hands or men who were too ignorant to know when to use them. Thought men who spend lots of money for education should be protected.

Dr. Spencer, Jr., believed that the dissemination of prescriptions through the medium of stock journals was wrong. As an illustration, a short time ago he saw a prescription for a uterine injection in a stock paper. It was an ounce of permanganate of potash to a quart of water. Would like to see the effects produced by such an injection. Thought the milk fever problem had gone so far that it was useless to discuss it.

Dr. Segsworth thought that everything was fair in war. Editors were right to maintain a veterinary department and practitioners were right to keep their knowledge to themselves.

Dr. Gordon cited an instance where a man came nine miles to Hanford to buy a milk tube. He had a pump but no tube. Not being able to procure a tube he let the cow die rather than call in a veterinarian. Knew that all the farmers in his community would treat their own cases if able to make diagnoses.

Dr. Faulkner told of a farmer calling him in to treat a case of milk fever. Made one visit and gave air treatment. On the following day he learned that this same farmer had another case besides the one he treated, which they treated themselves after having seen how it was done. The cow he treated made nice recovery, but the other cow died from septicæmia of the udder.

Dr. Archibald believed that after people had had bad luck applying the treatment themselves they would eventually conclude that it was cheaper to employ an expert and have the treatment applied properly. He thought that the members were paying too much attention to the discussion of the milk fever problem and not giving the other features of Drs. Blemer and Spencer's papers the consideration they deserved.

Dr. Danielson thought there were two sides to the question. He believed that any proper knowledge given to the public did

no harm to the professional man. Considered that the dissemination of good literature amongst the laity was a benefit to the practitioner.

Dr. Haring stated that his duties frequently required him to talk at farmer's institutions on the subject of animal diseases, such as anthrax, blackleg, tuberculosis, and other matters pertaining to veterinary sanitary science, and he was usually requested to give his views on the air treatment of milk fever.

Dr. Creely thought that Dr. Blemer was correct from his standpoint. He was making a living by conducting a stock paper and if he published a veterinary page in his journal and made a profit thereby he had a perfect right to do so. Personally he had discontinued to answer queries for stock papers. He had done so, but usually endeavored to answer them in such an ambiguous manner that the information conveyed to the laity did no harm nor did it do much good. Where a query came from a locality possessing a qualified veterinarian he usually advised the party making inquiry to consult said veterinarian. By conducting a veterinary page in this way no harm to the profession could result.

Dr. Somers knew that a great many prescriptions were taken out of stock papers and were used indiscriminately by the laity; while this was wrong he thought the public should know about treating milk fever and such conditions.

Dr. Sorenson was satisfied that readers of stock papers and journals were invariably our best clients.

Dr. Williams agreed with Dr. Sorenson. Believed no good could come of a discussion on the milk fever problem as it had gone too far to be affected by any action the Association might take in the premises.

Dr. Outhier thought that the publication of veterinary information did not seriously affect the profession.

Dr. Donnelly also believed that information disseminated by stock papers did no particular harm, neither did it do any good.

Mr. Sinclair, editor of the *Butchers and Stockgrowers Journal*, frequently had letters from subscribers requesting information regarding veterinary problems. To these he suggested that they consult the veterinarian located in their community. He thought this the best way to answer, notwithstanding the fact that he was in a position to command the best veterinary advice obtainable. Personally he considered the proposition wrong and looked upon it as an endeavor on the part of the inquirer to

obtain five dollars worth of information for a two-cent stamp.

Dr. Spencer, Sr., thought it was causing unprofessionalism and that veterinarians should take some steps to protect themselves. He further believed that the ordinary layman was unable to properly interpret answers to queries or to make proper application of the remedies prescribed in that way.

The President in closing the discussion stated that he agreed with Dr. Danielson and others regarding the dissemination of intelligent literature amongst the laity. While good literature, in his opinion, made better clients, poor literature of the style usually seen in the veterinary columns of agricultural and stock papers was a standing menace to the profession.

Dr. Chas. Keane, State Veterinarian, was then called upon and responded by reading an interesting and practical paper on "Some Live Stock Diseases and Their Relation to the Public Health." The paper was well received and provoked a good and enjoyable discussion.

Dr. Whittlesey when called upon to open the discussion responded by stating that in his opinion the whole proposition came down to a question of educating the public to take a proper view of the dangers to the human race existing in the forms of some animal diseases. Take for instance glanders; personally he had known of a number of friends and acquaintances who had succumbed to this dreaded disease, yet notwithstanding this fact the ordinary layman places little or no importance upon the ever-existing presence of the disease, more especially if it is one of his own animals which is affected. He did not think glanders was very contagious for the reason that there is a very small percentage of those exposed who contract the disease. In regard to the treatment of glanders did not believe it should be permitted by sanitary authorities. Thought it possible that cases of glanders did recover, but so far it had not been proved to his satisfaction. He also mentioned the fact that two friends doing sanitary police duty had contracted glanders. One of these, Dr. Ward B. Rowland, of Pasadena, contracted the disease eight years ago and was still far from being a well man.

Dr. Spencer, Sr., knew of a number of cases of parties contracting anthrax from skinning and handling animals that had died from that disease. He also knew of an instance in which a few years ago a number of cattle died from anthrax and the meat of same was preserved in the form of dried beef and sold as such. Knew of several cases of glanders contracted by owners handling affected animals. Thought it probably a good

idea for some few of the laity to get killed off in this way.

Dr. Spencer, Jr., did not regard mallein as having any value as a curative agent. Had also seen cases that reacted to mallein give negative results upon post-mortem.

Dr. Danielson stated that he was in favor of shooting cases of glanders as found.

Dr. Creely thought that a veterinarian was liable when he destroyed a case of glanders without the consent of the owner.

Dr. Blemer's experience was that most men will hide cases of glanders to prevent their destruction by the authorities.

Dr. Whittlesey cited some experiences Dr. Archibald and he had had in Bakersfield some years ago to show that in some cases it is better to destroy the animal and put the burden of proof upon the owner of same.

Dr. Blemer cited an instance to show how obstinate some individuals become over a case of glanders. An old empiric to prove that an animal in his charge did not have glanders, or if it had, was not dangerous, took some of the discharge from the horse's nostrils and rubbed it in his own; also took a drink from a bucket of water that the animal had been slobbering in, notwithstanding the fact that it was a malignant case of glanders.

Dr. Spencer, Jr., did not think that glanders was very contagious.

The discussion closed by the unanimous adoption of the following resolutions, introduced by Dr. R. A. Archibald at the request of Dr. R. T. Whittlesey:

WHEREAS, The Pasteur Vaccine Company is sending out literature in the form of advertising matter advocating and recommending the use of mallein for the cure of glanders; and

WHEREAS, We, the members of the California State Veterinary Medical Association, believe that the use of mallein except for diagnostic purposes is against the best interests of the public and detrimental to the veterinary profession; therefore be it

Resolved, That so long as the Pasteur Vaccine Company continues to advertise and recommend the use of mallein in the treatment of glanders, we suggest that the members of this organization desist from using mallein or any other product of the said Pasteur Vaccine Company, and that we respectfully recommend veterinarians throughout the United States to do likewise; and be it further

Resolved, That a copy of these resolutions be sent to the *Western Veterinarian* and the AMERICAN VETERINARY REVIEW for publication.

Nominations for officers for the ensuing year, the election to take place at the annual meeting, being the next order of business, the President called for nominations for the several offices. The following were made:

For President—Dr. R. A. Archibald.

Vice-President—Dr. P. H. Browning.

Secretary—Drs. Dawdy, Fisher and Blemer.

Treasurer—Dr. Carl W. Fisher.

Board of Examiners—Drs. Spencer, Creely, Fox and Summerfield, three to be elected.

Dr. Spencer, Sr., moved that a vote of thanks be extended to Drs. Ward and Haring for their kindness in providing accommodations for the holding of the meeting and other courtesies extended. Carried.

Dr. Creely moved that a vote of thanks be extended to Drs. Blemer, Keane and Spencer, Sr., for the able manner in which they had entertained the meeting. Carried.

After transacting some routine business the meeting adjourned to meet at the Palace Hotel, San Francisco, on Wednesday, December 13th, 1905.

THE CLINIC.

was a great success, the attendance being very large and the interest acute.

The operations performed during the Clinic were as follows:

Castration of a Cryptorchid, by Dr. H. A. Spencer, of San Jose.

Oöphorectomy of a mare per vagina in the standing position, by Dr. P. H. Browning, San Jose.

Oöphorectomy of a cow through the flank, by Dr. P. H. Browning.

Median neurectomy, by Dr. E. J. Creely, of San Francisco.

Cunean tenotomy on two cases, by Dr. R. A. Archibald, of Oakland.

Oöphorectomy of a bitch, by Dr. R. T. Whittlesey, of Los Angeles.

Passing Phillips' tube, by Dr. L. A. Danielson, of Madera.

ILLINOIS STATE V. M. ASSOCIATION.

LEXINGTON, ILL., October 29, 1905.

Editors American Veterinary Review :

DEAR SIRS :—Will you once more kindly change the date of meeting of the Illinois State Veterinary Medical Association to December 19 and 20?

This change is made necessary by the fact that our annual meeting is always held during the same week as the International Live Stock Exhibit. As the date of that exhibit has been postponed until December 16 to 23, we have changed our time of meeting to conform with theirs.

We are looking forward to this meeting with a great deal of pleasure, and feel that we are going to have a great meeting.

Below is an incomplete list of papers already promised :

Dr. W. F. Scott, Oak Park, "Obstetrics."

Dr. H. A. Presler, Fairbury, "The Etiology of Azoturia."

Dr. W. F. Weese, Ottawa, "Nervo-muscular Diseases affecting Locomotion."

Dr. T. J. Gunning, Neponset, "Some Things I Should Like to Know."

Dr. James Smellie, Eureka, "Indigestion in Cattle."

Dr. E. L. Quitman, Chicago, "Changes in the 8th Revision of the United States Pharmacopœia."

Dr. W. J. Martin, Kankakee, "Gelsemium."

Dr. N. P. Whitmore, Gardner, "Cirrhosis of the Liver."

Dr. L. C. Tiffany, Springfield, "Hæmorrhagic Septicæmia."

Dr. W. C. Galbraith, Wheaton, "Strangulated Hernia in Stallion."

Dr. J. D. Nighbert, Pittsfield, "Misplaced Bowel as an Obstacle to Parturition."

Drs. L. A. Merillat, Chicago; Geo. B. Jones, Sidell; E. F. Beckley, Rockford; N. I. Stringer, Watseka; and W. J. Lawson, Petersburg, subjects not yet given.

Reports of Cases—Dr. J. H. Crawford, Harvard, "Urinary Calculi" and "Foreign Body in Bladder," and Dr. C. G. Glendenning, Clinton, "Two Unusual Cases of Choking."

At our banquet on the evening of December 19th, at the Victoria Hotel, we expect several veterinarians of national reputation as our guests and speakers. On the following morning we will hold our clinics at the Chicago Veterinary College and the Chicago members are interesting themselves and hustling to give us a large and interesting clinic.

We hope no veterinarian in attendance at the International Exhibit will fail to call during the meeting.

Sincerely, W. H. WELCH,
Secretary.

ILLINOIS VETERINARY MEDICAL AND SURGICAL ASSOCIATION.

The meeting was called to order at the Beardsley Hotel, Champaign, by the President, Dr. F. J. Bliss, of Earlville, on August 16, 1905.

The minutes of the previous meeting were read and approved, and absentees noted. The meeting opened with a fair attendance and with the usual interest.

The President's semi-annual address was instructive and was received with applause.

There were three applications for membership: Robert Commins, of Rosehill; C. W. Walton, of Rantoul, and T. W. Corkery, of Urbana, who were elected unanimously.

A communication from Dr. H. P. McKinney, of Neoga, was received, with a paper on "Peritonitis." It was read and defended by Dr. W. A. Swain.

Dr W. A. Swain reported for discussion the similarity between azoturia and spasms of the glottis, which was discussed with heated interest and brought forth many valuable points for the members of the Association.

A bill of the Secretary for printing the programmes and stamps was presented and allowed, and an order issued on the Treasurer for $5.15. Received on membership fees $15; dues $1.50; total receipts $16.50.

Meeting adjourned to meet at 7 P. M.

Dr. R. W. Braithwait, with his coachman in a tallyho coach waiting at the exit of the hotel, and with that clear coolness upon his wholesouled countenance, extended an invitation to each and every veterinary surgeon who attended this meeting to take a trip over the beautiful city, which he praises so highly. It was with anticipations of the keenest pleasure that the invitation was accepted with as much pride as the donor had in presenting it.

Committee on Programme—Dr. W. A. Swain, Dr. R. W. Braithwait, Dr. C. W. Walton.

Meeting adjourned to meet Jan., 1906, at Decatur.

JAS. M. REED, *Secretary.*

MARYLAND STATE VETERINARY MEDICAL SOCIETY.

This Society met Friday evening, November 24, at 7 o'clock, at Joyce's Hotel, Baltimore, with Dr. Frank H. Mackie, President, in the chair.

A full attendance of members from all parts of the State was noted.

A delightful supper was indulged in by those present, after the proper disposition of which the main business of the meeting was attacked.

The possibility and probability of an attempt to change the law relating to the position of Chief of the Bureau of Animal Industry was fully discussed and the advisability of prompt action realized.

It was moved by Dr. Wm. Dougherty, seconded by Dr. J. P. Grogan, "that the Secretary endeavor to obtain the signatures of all registered veterinarians in the State of Maryland by the best mode possible, to a letter to the representatives in Congress, protesting against changing the present law relating to the position of Chief of the Bureau of Animal Industry and the supplanting of the veterinary Chief by the appointment of a layman." The motion was carried.

The names of several applicants for membership in the Society were recommended and placed in the hands of the Board of Censors.

The meeting then adjourned.

WM. H. MARTENET, *Secretary.*

MASSACHUSETTS VETERINARY ASSOCIATION.

The regular monthly meeting of this Association was held at Young's Hotel, Boston, Wednesday evening, October 25th, at 7.30 P. M.

There were sixteen members present. Minutes of previous meeting were accepted as read. On motion of Dr. Winslow, seconded by Dr. Perry, it was voted to dispense with the routine business. Then adjourned to the rooms of the Electro Radiation Co., 532 Columbus, where an interesting lecture and demonstration was given by Dr. Strong, of Tufts College, of an X-Ray machine, also high frequency current as used therapeutically. On motion of Dr. La Baw, seconded by Dr. Playdon, it was voted to extend a vote of thanks to Prof. Strong.

Adjourned 10.15 P. M. F. J. BABBITT, *Secretary.*

NEW YORK STATE BOARD OF VETERINARY EXAMINERS.

The organization meeting of the newly appointed Board was held at Albany, October 27, at 3 o'clock. Dr. Charles E. Clayton, of New York City, was elected President, and Dr. Wm. Henry Kelly, of Albany, Secretary. The chairs were assigned as follows: Anatomy and surgery, Dr. C. E. Clayton; physiology, Dr. T. O'Dea; chemistry and therapeutics and materia medica, Dr. E. B. Ackerman; obstetrics, Dr. A. G. Tegg; pathology, diagnosis and practice, Dr. Wm. Henry Kelly.

IOWA STATE VETERINARY MEDICAL ASSOCIATION.

The eighteenth annual meeting of this Association will be held at Ames, Iowa, January 11, 12, and 13, 1906. We expect to have a splendid meeting, and all are invited to be present.

HAL C. SIMPSON, *Secretary.*

As illustrating the versatility of the modern veterinarian, Veterinary Surgeon Desmond, of Australia, recently won high honors in the International Smallbore Rifle Match between the Southfields (London, Eng.) Miniature Club and the Metropolitan Club of South Australia.

DEATH OF DR. W. HORACE HOSKINS' MOTHER.—We much regret to announce the death from pneumonia of Mrs. Jane Hoskins, which occurred at her home in Rockdale, Pa., Nov. 22, after a short illness. She was seventy-seven years old and one of the most prominent women in Delaware County. Bereft of her husband many years ago, she was left with the care and rearing of four boys, and it has been the comfort and glory of her old age to witness each one of them assume a high position in the world's work, due in great measure to her own loving guidance in their earlier days. Her sons survive her, and are as follows: Atwood B. Hoskins, prominent business man and well-known pigeon fancier of Rockdale; Dr. W. Horace Hoskins, known everywhere for his prominent work in behalf of his chosen profession of veterinary medicine; Prof. J. Preston Hoskins, an instructor in Princeton University; and Rev. Frank Hoskins, a Presbyterian missionary minister, stationed at Beirut, Syria. All veterinarians will extend to Dr. Hoskins their warmest sympathy in his great bereavement.

NEWS AND ITEMS.

DR. D. H. MILLER, of Harlan, Iowa, has located in Des Moines, Dr. Fred. E. Branzie has succeeded to Dr. Miller's practice in Harlan.

IN Uruguay, until within a few years, the sale of hides was the only part of the cattle industry that yielded any cash, the meat being mostly discarded as of no value.

PORTAGE LA PRAIRIE (Canada) council has been talking about meat inspection, and the *Farmer's Advocate* (Winnipeg) strongly urges that none other than a veterinarian be selected for the position.

"YOU ARE MAKING A GREAT SUCCESS OF THE REVIEW, and I do not see how any good practitioner can be without it and keep up with the times."—(*J. C. Norton, D. V. M., Territorial Veterinarian, Phoenix, Arizona.*)

DR. MARK WHITE, JR., of Denver, Col., reports meeting a very bad case of distemper in a fourteen-year-old fox terrier dog. Its owner states that the dog has lived in Denver all its life, and had not previously had the disease.

DR. LOOMIS, formerly assistant to Dr. Thomas G. Sherwood, of New York, and Dr. H. J. Milks (N. Y. S. V. C., '04) have leased the office and hospital of the late Dr. John A. Bell, of Watertown, N. Y., and begun practice at that place.

DR. W. C. RAYEN, formerly of Nashville, Tenn., who did so much to make the meeting of the A. V. M. A. in 1897 a success, has located at Hemet, California, where he has purchased a ranch, and proposes to do a little practice on the side.

PRESIDENT W. L. WILLIAMS, of the New York State Veterinary Medical Society, has appointed the following Committee on Legislation ; Roscoe R. Bell, Brooklyn ; James Law, Ithaca ; Arthur O'Shea, New York, with the President and Secretary *ex officio.*

PROF. WILFRED LELLMAN, of New York City, has been largely quoted by the New York *Herald* as having carried out experiments upon a large number of calves with the bovovaccine of Prof. von Behring, and he is confident that all are immune to the disease.

DR. S. H. BAUMAN, President of the Iowa State Veterinary Medical Association, has been very ill for some time with typhoid fever. His wife and three daughters have been prostrated with the same disease. We are glad to learn through Secretary Hal C. Simpson that all are doing well.

MARRIAGES.—C. M. McFarland, D. V. S. (K. C. V. C., 1900), St. Joseph, Mo., to Miss Anna R. Brown, of same city, on Aug. 15. . . . E. H. Kilian, D. V. S. (K. C. V. C., '05), Manhattan, Kansas, to Miss Montgomery, of Council Grove. . . . I. W. McEachran, D. V. S. (K. C. V. C., '05), Geneva, Neb., to Miss Gertrude Gough, Minneapolis, Minn., July 11.

OPEN-AIR TREATMENT FOR CATTLE.—It is understood that the Dominion Minister of Agriculture has authorized the Veterinary Department to institute an experiment with the cattle of the Nappan (N. S.) Experimental Farm, which reacted some time since when subjected to the tuberculin test, first by Dr. Hall, V. S., of Amherst, and subsequently by Dr. J. H. Frink, V. S., of St. John. The idea is to submit both those which reacted and those that did not to the same open-air treatment as is now resorted to in the case of human beings affected with tuberculosis. By removing them to a suitable place, where they will be isolated, a series of experiments may be carried out to determine the curative action on cattle of the outdoor and nutrition system of treatment. The importance of the subject would seem to make it desirable that the Dominion Veterinary Service should institute such an investigation, and under the competent direction of Dr. Rutherford, Veterinary Director-General, arrive at some definite conclusions that would be of service to the live-stock interests of the country.—(*Farmer's Advocate, Winnipeg, Manitoba, Nov. 29.)*

HOW THE VETERINARY CORRESPONDENCE SCHOOL MAKES IT PAY.—We find the following item in the *Rural New Yorker* of recent date: "A subscriber from Indiana sends us an advertisement of the Veterinary Science Association, London, Canada, and two letters which they have sent him in reply to his inquiry. The advertisement is headed '*Farmers' Sons Wanted.*' It promises $60 a month and expenses. In the first letter he is offered $60 a month, promised $50 a month for expenses and advance of $240 in salary for the second year. How does he want his salary paid, by the month or week? They are just itching, it would seem, to get the money to him. It is so easy, it seems like finding money. The work is to be: 'Looking after the advertising and agents, shipping goods, attending to correspondence, keeping track of the business and such other work as the office duties may require.' That certainly seems like a snap, and no wonder the young man wrote back that he was ready to go to work. From their anxiety to have a man in this particu-

lar field, one would expect a prompt engagement, but no. The young man would require some preparation to fit him for the work. For this he needs a book. It is their book. It is a large book. It is a valuable book. If the young man will send on $3 they will send him the book. That is as far as negotiations have gone yet. If the young man should send for the book, they would then probably want him to demonstrate his ability to fill the position by sending on a further remittance for some other valuable product, and so on. It is the old scheme. Under the promise of an easy job and big money at home, you are induced to make a remittance for something you don't want, and wouldn't buy. The promise of a salaried position is a fake pure and simple, and one of the meanest fakes of which we have any knowledge. We refused this advertising years ago, and would not carry a line of it under any consideration. Put this in the list of this things to be let alone."

A DOG AT THE TELEPHONE.—Good dog stories have been scarce of late, and only for that reason are we moved to present one that appears with many more exclamation marks than it deserves in the Buffalo *Courier*. A dispatch to that paper from Sayre, Penn., tries to make us believe that about the queerest thing that ever happened in that part of the country was the answering of a telephone call one day last week by Ring, a particularly able hunting dog owned jointly by two not very near neighbors. Ring was at the house of one of his owners when the other wanted to use him and announced the desire over the wire. The mistress of the house answered the call and said that, as she was alone, there was nobody to take the dog over to the other place, and that he would have to be sent for. The distant part proprietor didn't have time for that, so he asked that the telephone receiver be held to the animal's ear in an attempt to see if he could not be informed of what was on foot and be persuaded to make the journey alone. This was done, Ring evidently recognized the absent master's voice, gave what seemed to be comprehending and delighted attention to the brief exposition of a proposed hunting trip, and then, when let out of the door, ran madly by the shortest course to his second home. This story, presumably, is true as regards its facts, but the deductions from it are more than rash, and the dog is credited with knowing a good deal more than there is any real probability he did know. There is hardly a chance that he had the faintest comprehension of the use of the telephone. Probably he did recognize the voice, and probably he did get some vague,

dim notion that the man he heard was bound afield. Thereupon he took the first opportunity to investigate the mystery at the only place that promised an explanation. The understanding of the message was entirely imaginary, and the assumption of the understanding was only another case of supposing that when, in given circumstances, an animal does what a man would have done in the same circumstances, he does it for the clearly argued reasons that would have moved the man. That is the most misleading of delusions, and to it is due all the nonsense which makes so many "nature stories" so irritating to minds with even the beginning of the scientific instinct.—*(N. Y. Times, Nov. 23.)*

THE BIOGRAPHY OF A POPULAR VETERINARIAN.—At the annual meeting of St. Andrew's Society, held at Ottawa, Canada, Nov. 2, Dr. J. G. Rutherford, Veterinary Director-General of the Dominion and Vice-President of the American Veterinary Medical Association since his election to membership in 1902, was unanimously chosen President of that large Scottish organization. In connection with this event, we find the following sketch of the distinguished veterinarian's life in the Ottawa *Free Press* of Nov. 3, and we are sure it will be of interest to REVIEW readers: "J. G. Rutherford, V. S., chief veterinary inspector, Ottawa, one of the best known men in the Canadian West, was born at Mountain Cross, in Scotland, in 1857, his father being the Rev. Robert Rutherford, Newlands, Peeblesshire, and his mother, Agnes Gunion. Mr. Rutherford's success in his special line of work is an example of natural bent and concentration, for the record shows that he attended the Glasgow High School till he was 15 and then he became an agricultural student at Haddington, later under Robert Scott, of Philipaugh, Selkirkshire, and then with a private tutor at Edinburgh. When he came to Canada in 1875 he continued his studies at the Ontario Agricultural College, Guelph, where he took the first prize for his year in practical agriculture. He then spent a year on the Bow Park farm at Brantford, one of the greatest stock farms in Canada. Entering the Ontario Veterinary College, Toronto, he graduated in 1879, carrying off the gold medal. Dr. Rutherford first opened an office at Woodstock, Ontario, but in addition to his practice entered into the work of shipping horses to Great Britain and importing high-class breeding animals from that country. During this time he visited and took lectures in the leading veterinary colleges of Scotland and the United States. In 1884 he moved to Portage La Prairie and

from that time forward no man has been more intimately connected with the development of the Canadian West. Before proceeding west he was a veterinary inspector for the province of Ontario and he was immediately appointed to a similar post in Manitoba, which office he held until 1892, when he resigned in order to enter the arena of politics. Portage La Prairie is the centre of the wealthiest agricultural districts of Manitoba, and Dr. Rutherford rapidly worked up an extensive practice and earned the reputation of being one of the most skilful and best informed veterinarians in Canada. In 1901 he was made special veterinarian of the quarantine department by the Dominion government, and sent to Great Britain, with headquarters at Glasgow, to inspect cattle being shipped to Canada, to prevent the importation of animals having tuberculosis or other diseases. In the performance of his duties he visited the farms of the leading breeders in Great Britain and from May to November traveled no less than 15,000 miles. In February, 1902, he was appointed chief veterinary inspector for the Dominion, with headquarters at Ottawa. In 1904 his title was changed to that of veterinary director-general. Dr. Rutherford first entered public life in 1892 when he was elected member for Lakeside in the Manitoba legislature by a large majority. He at once became one of the forces in the Liberal party in Manitoba. He was again elected in the general election of January, 1896, but resigned shortly after to contest the Dominion constituency of Macdonald. He was nominally defeated in this election, but the seat being voided because of corrupt practices, Dr. Rutherford was returned in the subsequent bye-election and sat in the Dominion House until 1900. Dr. Rutherford has been ever ready to forward the interests of Manitoba generally and of the prosperous town of Portage La Prairie. In this connection he has been called upon to fill the following positions: President of the Horse-Breeders' Association of Manitoba, President of the Manitoba Veterinary Association, President of the Portage and Lakeside Agricultural Society, and of the St. Andrew's Society. He was one of the founders and until his removal to Ottawa, chairman of the Portage La Prairie General Hospital. Dr. Rutherford is a Mason, a member of the A. O. U. W., and in religious belief is a member of the Church of England. He married in 1887, Edith, daughter of Washington Boultbee, Esq., of Ancaster, Ont. As a speaker he has gained high repute, having a vein of very caustic sarcasm relieved by a flow of real wit and humor."

VETERINARY MEDICAL ASSOCIATION MEETINGS.

In the accompanying table will be found the dates, places of meeting, and Secretaries' names and addresses of all the Veterinary Medical Associations of the United States and Canada. Secretaries are requested to see that their organizations are properly included in the list.

Name of Organization.	Date of Next Meeting.	Place of Meeting	Name and Address Secretary.
American V. M. Ass'n.....	Aug. 21-24, '06	N. Haven, Ct.	J. J. Repp, Phila., Pa.
Vet. Med. Ass'n of N. J.....	Jan. 11, 1906.	Trenton.	W. H Lowe, Paterson.
Connecticut V. M. Ass'n,.....	.....	.....	B. K. Dow, Willimantic.
New York S. V. M. Soc'y....	Sept., 1906.	Buffalo.	G. T. Stone, Binghamton.
Schuylkill Valley V. M. A....	Dec 20.	Reading, Pa.	W. G. Huyett, Wernersville.
Passaic Co. V. M. Ass'n.....	Monthly.	Paterson, N. J.	H. K. Berry, Paterson, N. J.
Texas V. M. Ass'n...	....	Dallas.	E. L. Lewis, Waxahachie.
Massachusetts Vet. Ass'n.....	Monthly.	Boston.	F. J. Babbitt, Lynn, Mass.
Maine Vet. Med. Ass'n.....	.....	.....	C. L. Blakely, Augusta.
Central Canada V. Ass'n.....	.....	Ottawa.	A. E. James, Ottawa.
Michigan State V. M. Ass'n...	2d Tu-Wed Feb	Lansing	Judson Black, Richmond.
Alumni Ass'n N. Y.-A. V. C..	April, 1906.	141 W. 54th St	W. C. Miller, N Y. City.
Illinois State V. M. Ass'n.....	Dec. 19 and 20.	Chicago.	W. H. Welch, Lexington, Ill
Wisconsin Soc. Vet. Grad.....	Call of Pres't.	Sheboygan.	S Beattie, Madison.
Illinois V. M. and Surg. A....	Jan., 1906.	Decatur.	J. M. Reed, Mattoon.
Vet. Ass'n of Manitoba	.....	.....	F. Torrance, Winnipeg.
North Carolina V. M. Ass'n...	.....	.....	T. B. Carroll, Wilmington.
Ontario Vet Ass'n.....	.....	....	C H. Sweetapple, Toronto.
V. M. Ass'n New York Co....	1st Wed. Oct.	141 W. 54th St	D. J. Mangan. N. Y. City.
Ohio State V. M. Ass'n.....	January, 1906.	Columbus.	W. H. Gribble, Wash'n C.H.
Western Penn. V. M. Ass'n...	1st Wed. ea. mo	Pittsburgh.	F. Weitzell, Allegheny.
Missouri Vet. Med. Ass'n.....	.....	.....	F. F. Brown, Kansas City.
Genesee Valley V. M. Ass'n...	.....	.....	J. H. Taylor, Henrietta, N.Y.
Iowa State V. M. Ass'n.....	Jan. 11-13 '06.	Ames.	H. C. Simpson, Denison, Ia.
Minnesota State V. M. Ass'n..	Jan. 10-11, '06.	St. Paul.	J. G. Annand, Minneapolis.
Pennsylvania State V. M. A...	March, 1906.	.....	C. J. Marshall, Philadelphia
Keystone V. M. Ass'n.....	2d Tues. Dec.	Philadelphia.	A. W. Ormeston, 102 Herman St., Germantown, Pa.
Colorado State V. M. Ass'n...	1st Mon. in June	Denver.	M. J. Woodliffe, Denver.
Missouri Valley V. Ass'n	January, 1906.	Kansas City.	B. F. Kaupp, Kansas City.
Rhode Island V. M. Ass'n....	3d Thursday June and Dec.	Providence.	T. E. Robinson, Westerly, R. I
North Dakota V. M. Ass'n....	January, 1906.	Fargo.	E. J. Davidson, Grand Forks
California State V. M. Ass'n...	Mch. Je. Sep, Dc	San Francisco	P. H. Browning, San Jose.
Southern Auxiliary of California State V. M. Ass'n....	Jan. Apl. Jy, Oct.	Los Angeles.	H. D. Fenimore, Los Angeles
South Dakota V. M. A.....	....	.....	E. L. Moore. Brookings.
Nebraska V. M. Ass'n.....	.....	.....	Hans Jenson, Weeping Water
Kansas State V. M. Ass'n....	.....	Topeka.	Hugh S. Maxwell, Salina.
Ass'n Médécale Veternaire Francaise "Laval,".....	1st & 3d Thur. of each month.	Lect. R'm Laval Un'y Mon.	J. P. A. Houde, Montreal.
Alumni Association A. V. Col..	April each yr.	New York.	F. R. Hanson, N. Y. City.
Province of Quebec V. M. A...	.....	Mon. & Que.	Gustave Boyer, Rigand, P.Q.
Kentucky V. M. Ass'n.....	.....	... .	D. A. Piatt, Lexington.
Wolverine State V. M. Ass'n..	.....	.....	W. W. Thorburn.
Washington State Col. V. M. A.	Monthly.	Pullman, Wa.	Wm. D. Mason. Pullman.
Ohio Valley V. M. Ass'n.....	.....	Evansville, I'd	J. W. Moses, Mt. Vernon, Ind.
Iowa-Nebraska V. M. Ass'n..	.....	.....	A. T. Peters, Lincoln, Neb.
Louisiana State V. M. Ass'n..	.....	.....	E. P. Flower, Baton Rouge.
Essex Co. (N. J.) V. M. Ass'n	.....	.....	B. K. Baldwin, Newark.

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